RIVERS OF TAMIL NADU

ANNUAL WATER QUALITY REPORT

FOR THE YEAR

APRIL 2021 - MARCH 2022

CONTENTS

Summary

An Over view of River Quality of major rivers in Tamil Nadu

National
Water Quality
Monitoring
Programme

Water Quality Monitoring is critical for protecting public health, preserving aquatic life, supporting economic development, and ensuring compliance with regulations. Regular water quality monitoring helps to identify and mitigate pollution sources, thereby contributing to sustainable water resource management.

There are 17 Major river basin in Tamil Nadu and few notable rivers are Cauvery, Bhavani, Palar, Tamiraparani, Noyyal, Amaravati, Vaigai, Thirumanimutharu and ponnaiyaru.

Among the various rivers that flow in/through our state River Cauvery, also called Dakshin Ganga, flourished the landscapes and built prosperity. Tamils build huge tanks to fill from River Cauvery and constructed prominent temples nearby to make the water sacred and well respected.

Cultural significance and the civilization that evolved along the banks of rivers of **Tamil Nadu** is the base of all economic development that followed. Rivers were not just seen as source of water but sustenance of people's soul and health of the community.

To maintain the health of these Rivers, Tamil Nadu Pollution Control Board follows the guidelines set by Central Pollution Control Board (CPCB) and monitors water quality by setting up monitoring stations, collecting & analyzing water samples, assessing water quality, reporting, disseminating data and monitoring compliance. This collaborative approach ensures that water quality is monitored and regulated effectively, contributing to **sustainable water resource management in India.**

River Monitoring in Tamil Nadu

In order to save the Rivers various programs such as Global Environmental Monitoring System (GEMS), Monitoring of Indian National Aquatic Recourses (MINARS), Coastal Water and National River Conservation Program (NRCP) were introduced by CPCB. In recent Years, in order to systemise, CPCB have categorised all previous programs under one Umbrella which is called as **National Water Quality Monitoring program (NWMP).**

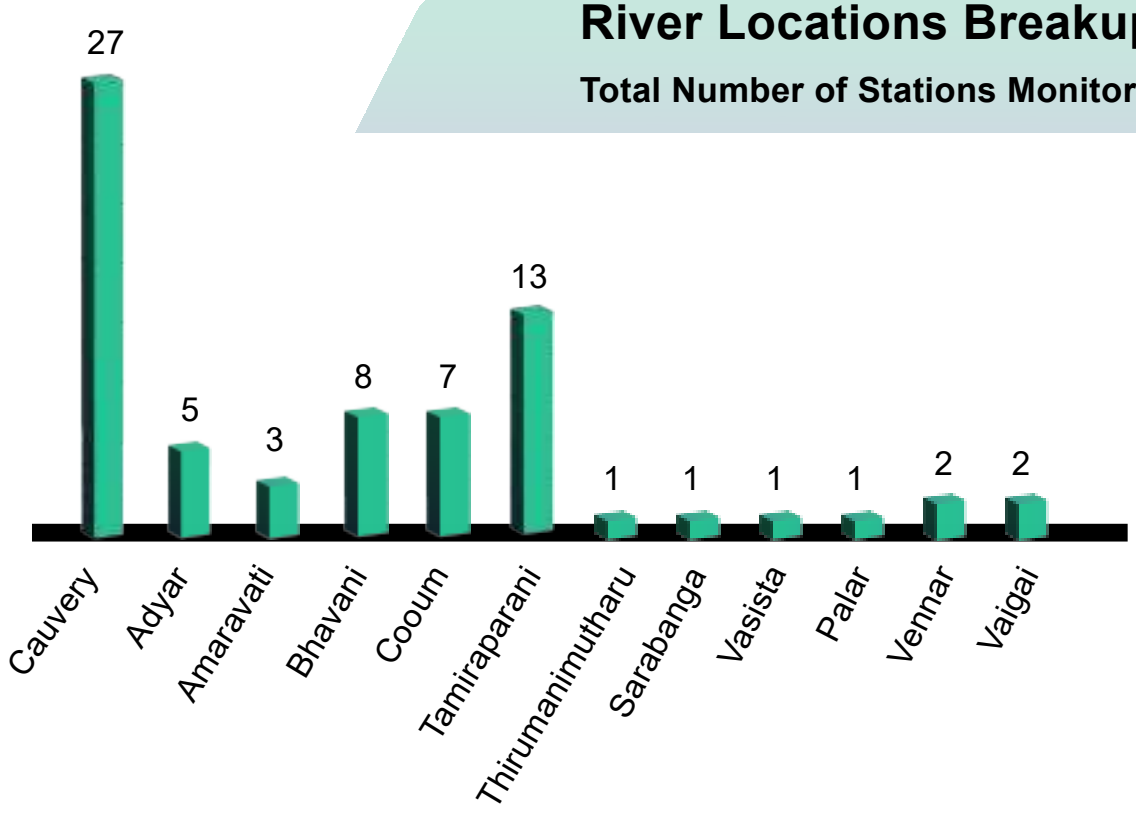
Based on the analysis of samples collected, CPCB and SPCBs assess the water quality and assign Classification from A to E to designate its use. The classification are called us Designated Best Usage (DBU) criteria. Class A signifies the best quality, and Class E signifies the poorest quality. This book aims to deliver the quality of rivers monitored by TNPCB during the year 2021 - 2022

Water Quality Monitoring Network:

Present water quality monitoring network under **National Water Quality Monitoring Programme (NWMP**) comprises 4484 stations onsurface and groundwater in 28 States and 8 Union Territories. Monitoring is carried out with a frequency on monthly, quarterly, half yearly and yearly basis. Under this programme Tamil Nadu Pollution Control Board (TNPCB) monitor the state's rivers, ground water & coastal water in Tamilnadu. TNPCB monitors rivers in 71 locations and the breakup is given below.

River Locations Breakup

Total Number of Stations Monitored - 71



Designated Best Use Water Quality Criteria - CPCB

Drinking water source without conventional treatment but after disinfection			
Class A			
pH	DO	BOD 5 days 20ºC	TC
6.5 - 8.5	6 or more	2 or less	50 or less
	mg/L	mg/L	MPN/100ml

Outdoor Bathing (Organised)			
Class B			
pH	DO	BOD 5 days 20ºC	TC
6.5 - 8.5	5 or more	3 or less	500 or less
	mg/L	mg/L	MPN/100ml

Drinking water source after conventional treatment and disinfection			
Class C			
pH	DO	BOD 5 days 20ºC	TC
6 - 9	4 or more	3 or less	5000 or less
	mg/L	mg/L	MPN/100ml

Designated Best Use Water Quality Criteria - CPCB

Propogation of wild life and fisheries		
Class D		
pH	DO	Free Ammonia
6.5 – 8.5	4 or more	1.2 or less
	mg/L	mg/L

Irrigation, Industrial Cooling, Controlled Waste disposal			
Class E			
pH	Electrical Conductivity	Sodium Absorption Ratio	Boron
6.0 - 8.5	Max 2250 @ 25° C	Max 26	2
	micro mhos/cm	-	mg/L

pH

pH is a measure of the acidity or alkalinity of water. It is essential to monitor pH because it affects the chemical reactions and biological processes that occur in aquatic ecosystems. Organisms have specific pH requirements for survival and reproduction. Extreme pH levels can be detrimental to aquatic life. For example, highly acidic water can harm fish and other aquatic organisms, while highly alkaline water can lead to the formation of scales and deposits in water pipes and equipment. Monitoring pH helps ensure that water is within a suitable range for various uses, including drinking water, aquatic habitats, and industrial processes.

DO

Dissolved Oxygen (DO) refers to the amount of oxygen gas dissolved in water. It is vital for aquatic organisms that rely on oxygen for respiration, such as fish, invertebrates, and bacteria. DO levels fluctuate based on various factors, including temperature, pressure, and photosynthesis by aquatic plants. Monitoring DO levels is crucial because low oxygen levels (hypoxia) can lead to the death of fish and other organisms, disrupt the balance of aquatic ecosystems, and indicate poor water quality. Excessive organic matter, pollution, and eutrophication (excessive nutrient enrichment) can deplete DO levels, negatively impacting aquatic life.

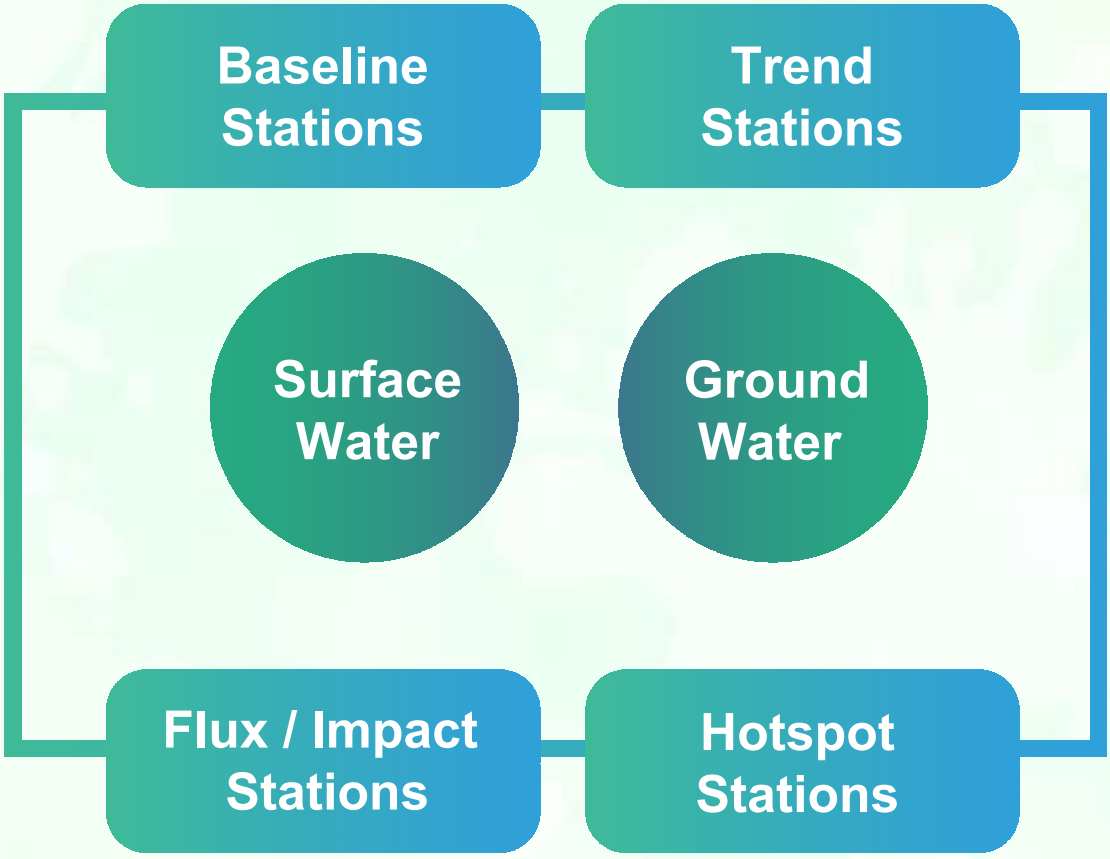
BOD

Biochemical Oxygen Demand (BOD) is a measure of the amount of dissolved oxygen required by microorganisms to break down organic matter in water through biological processes. It is an important indicator of water pollution and the presence of organic contaminants. High BOD levels indicate high organic pollution, as they reflect the demand for oxygen by microorganisms decomposing organic materials. Monitoring BOD helps assess the health of water bodies, evaluate the efficiency of wastewater treatment processes, and regulate discharges into water systems.

TC

Total Coliform (TC) bacteria are a group of bacteria found in the intestines of warm-blooded animals, including humans. While not all coliform bacteria are harmful, their presence in water indicates the potential contamination by fecal matter. Total coliforms, which include both fecal and non-fecal coliform bacteria, are used as an indicator of fecal contamination because they are easier to detect and enumerate than specific pathogenic bacteria. Therefore, the presence of total coliforms suggests a higher likelihood of harmful pathogens, such as Escherichia coli (E. coli), being present in the water.

Guidelines on water quality monitoring for National Water Quality Monitoring Program - NWMP (2017)



Classification of the sampling stations for surface & ground water

All the surface water station shall be a combination of Baseline, Trend, Flux and Hotspot stations.

Classification

Baseline Stations

Water quality monitoring location where there is no influence of human activities on water quality.

- Perennial Rivers,
- Lakes / reservoirs,
- Seasonal Rivers.

Trend Stations

Location designed to show how a particular point on water course varies over time due to geogenic & anthropogenic activities

Flux Stations

- Location for measuring the mass of particular pollutant on main river stem.
- To find extend of pollution.
- To measure impact of pollution

Hotspot Stations

Location where concentration of particular parameters or a group parameter are beyond permissible limits are beyond BIS IS 10500:2012.

*except bacteriological parameters

Sample frequency based on classifications

Baseline Stations

Frequency & Parameters :

Perennial river – 6 times a year
Seasonal river – 6 times equal spacing during flow period.

A. Pre- monsoon – Once a year. (25 parameters)
B. Rest of the year (After the pre- monsoon , at every two months interval (11 parameters)

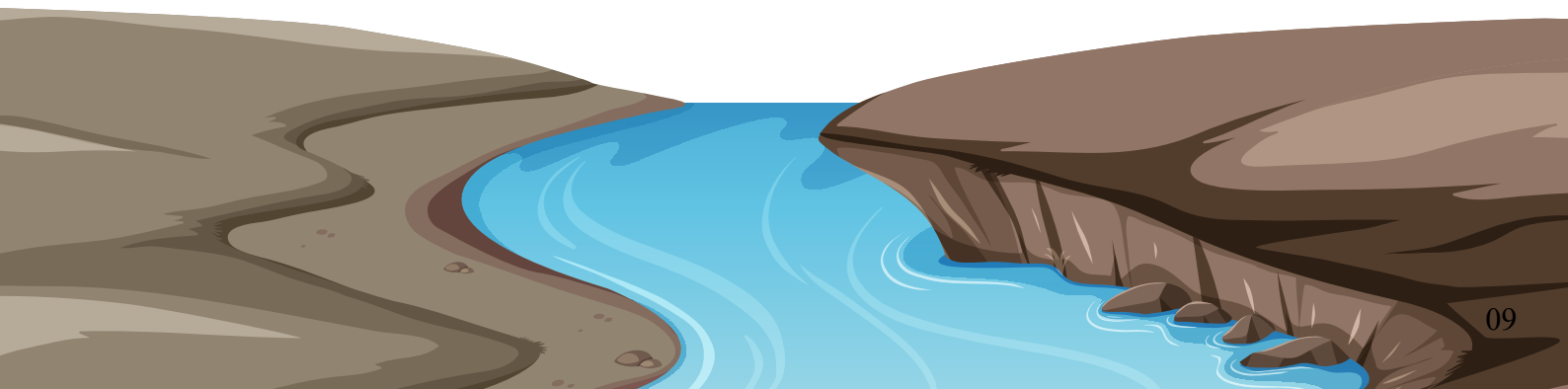
Trend Stations

Frequency & Parameters :

A. Once every month i.e 12 times a year (25 parameters)

B.
1. Pesticides : Analyse once a year during pre-monsoon period.

2. Toxic Metals: analyse twice a year during pre-monsoon and post monsoon period



Flux / Impact Stations

Frequency & Parameters :

A. Twice every month i.e 24 times year (25 parameters)

B.
1. Pesticides : Analyse once a year during pre-monsoon period.

2. Toxic Metals: Analyse twice a year during pre-monsoon and post Monsoon period

Hotspot Stations

Frequency & Parameters :

A. Twice every month i.e 24 times year (25 parameters)

B.
1. Pesticides : Analyse once a year during pre-monsoon period.

2. Toxic Metals: analyse twice a year during pre-monsoon and post monsoon period

River Cauvery

Stretches for about 416 Km

Cauvery River rises at Talakaveri in the Brahmagiri range in the Western Ghats, Kodagu district of the state of Karnataka and flows for about 800 km (320 km is in Karnataka, 416 km is in Tamil Nadu and 64 km forms the common boundary between Karnataka and Tamil Nadu States) before its outfall into Bay of Bengal.

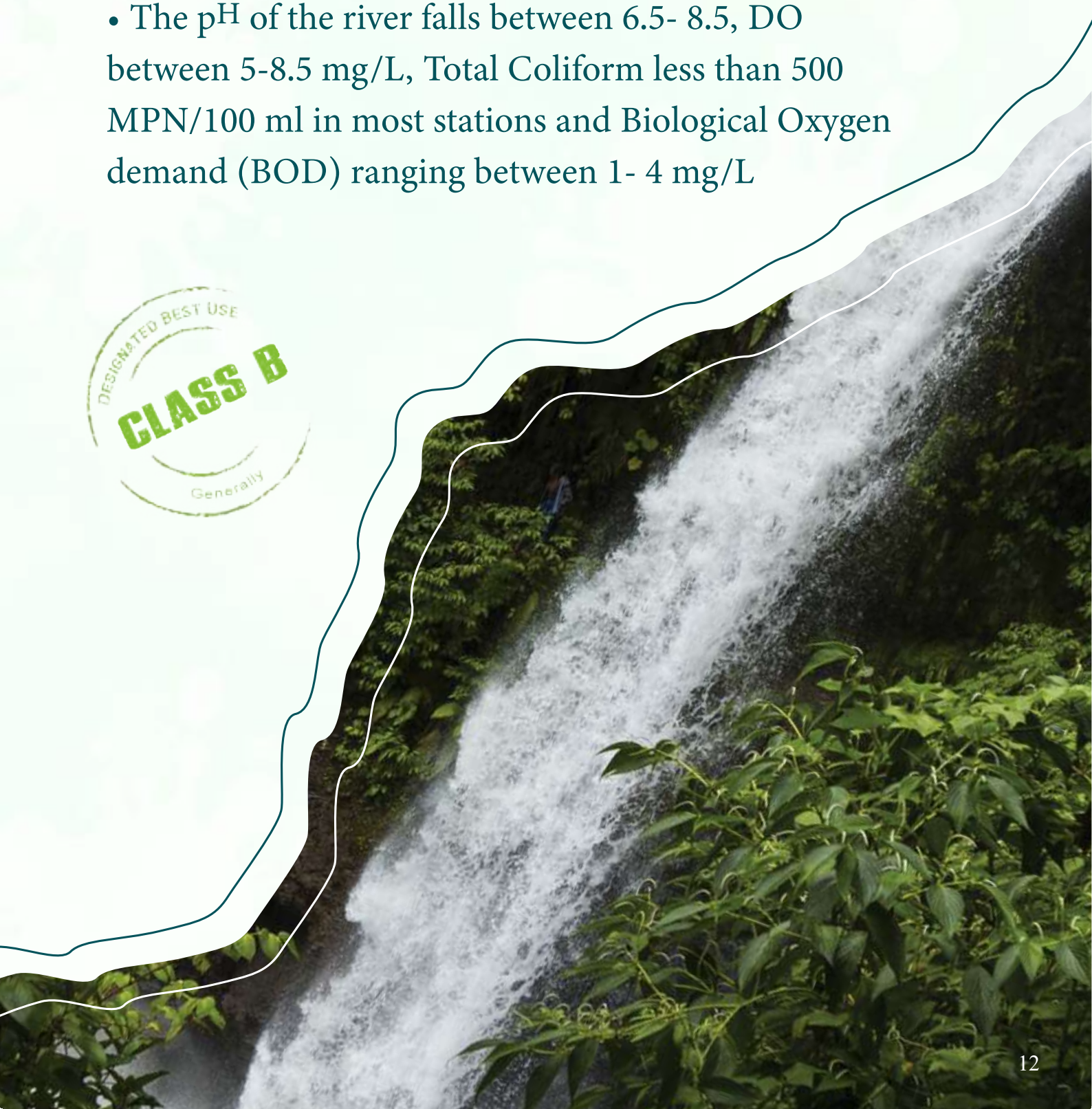
The river enters Tamil Nadu through the Dharmapuri district and meanders until the Hogenakkal Falls. From there, it flows towards the town of Salem and enters the Stanley Reservoir in Mettur.

It reaches the sea at Poompuhar, in Mayiladuthurai district. It is the third largest river – after Godavari and Krishna – in southern India, and the largest in the state of Tamil Nadu, which, on its course, bisects the state into north and south.

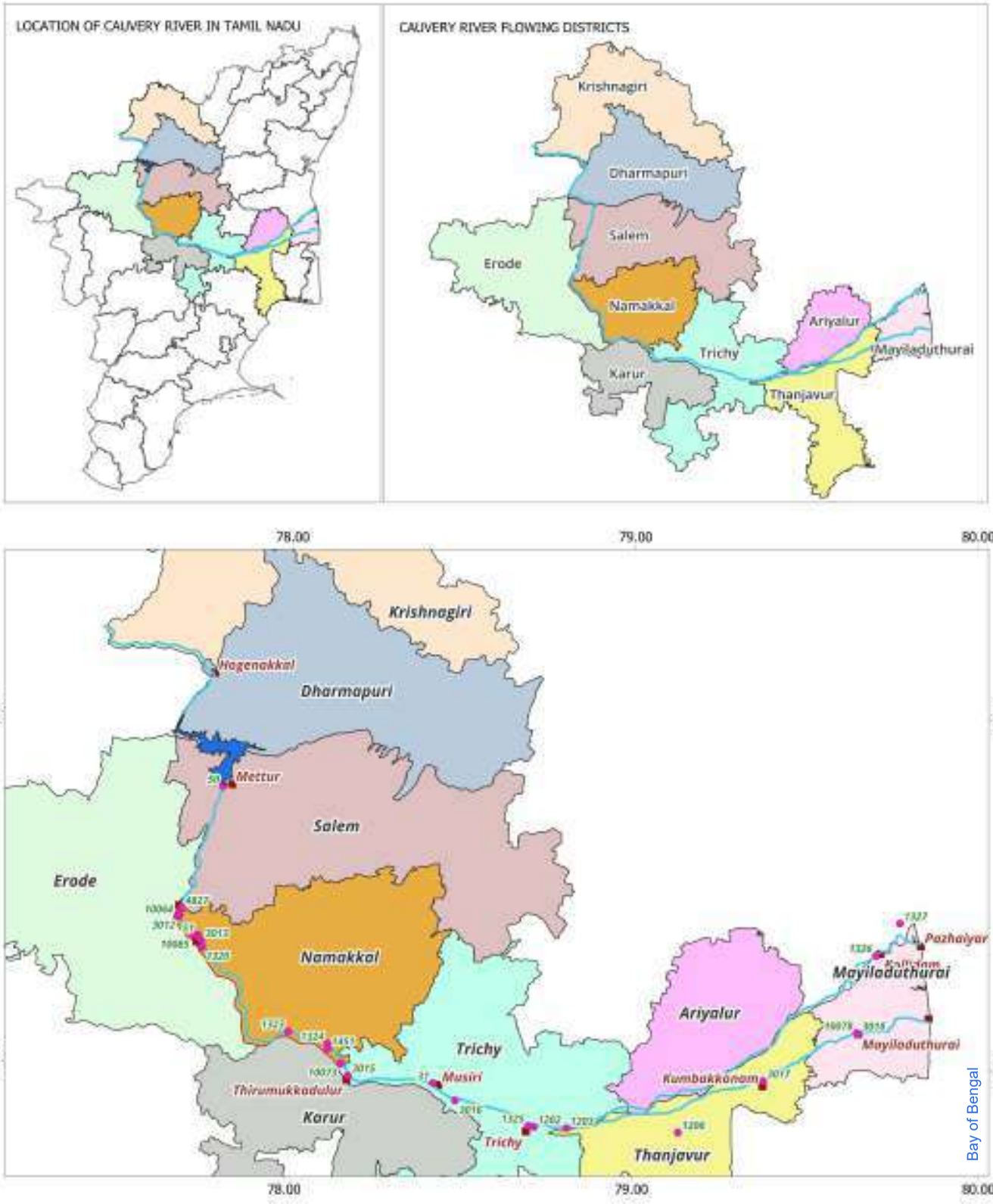
River Cauvery

• All the Monitoring stations of River Cauvery are classified as Trend stations and thus monitored once every Month.

• The pH of the river falls between 6.5- 8.5, DO between 5-8.5 mg/L, Total Coliform less than 500 MPN/100 ml in most stations and Biological Oxygen demand (BOD) ranging between 1- 4 mg/L

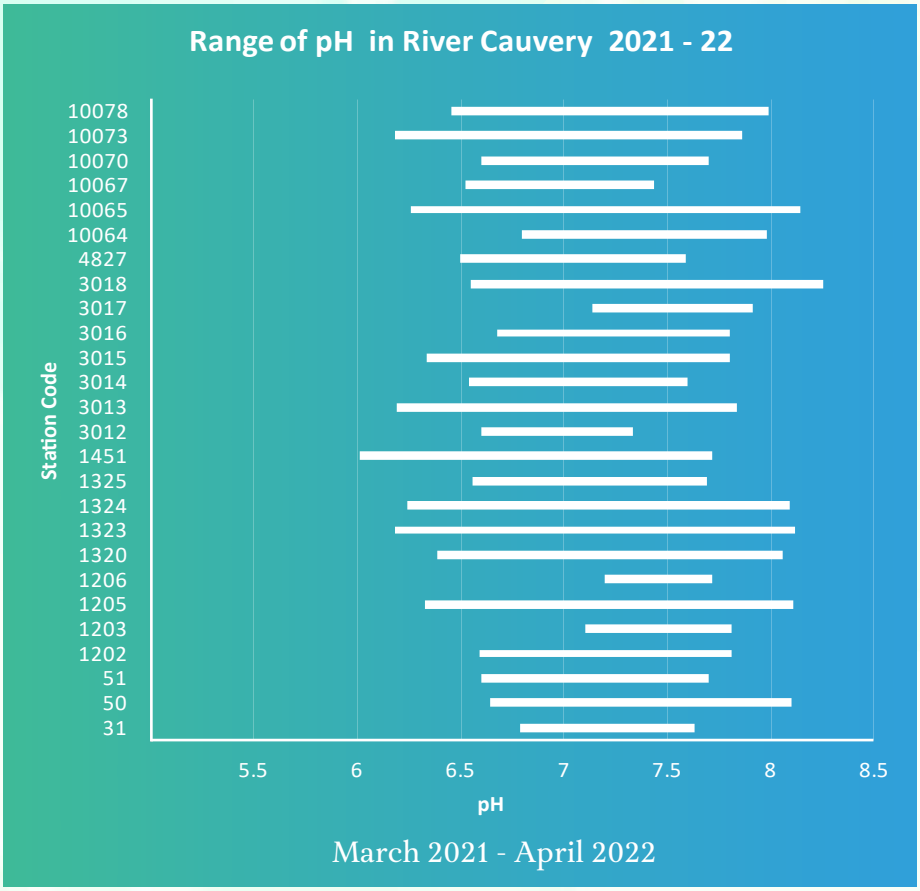


MAP SHOWING NATIONAL WATER QUALITY MONITORING PROGRAMME (NWMP) SAMPLING STATIONS ALONG CAUVERY RIVER, TAMIL NADU



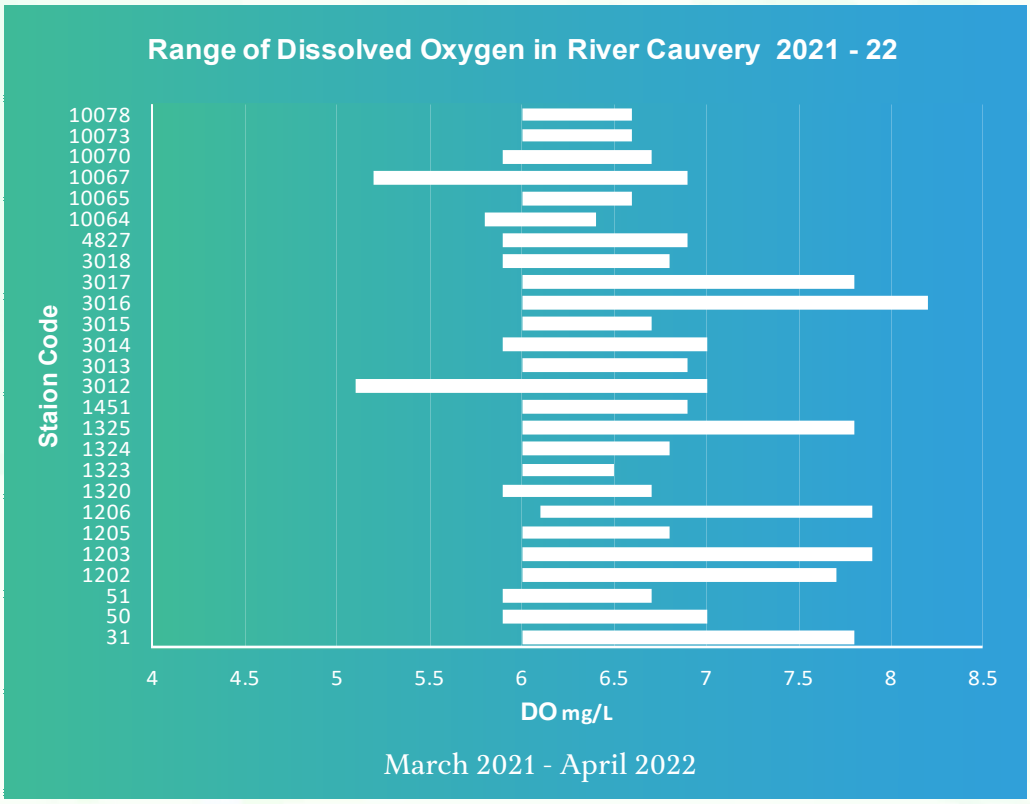
S.L No	Station Code	Location Name
1	31	River Cauvery at Musiri
2	50	River Cauvery at Mettur
3	51	River Cauvery at Pallippalayam
4	1202	River Cauvery at Tiruchirappalli U/s
5	1203	River Cauvery at Trichy, Grand Anaicut,
6	1206	River Cauvery at Thanjavur, Tamilnadu
7	1320	River Cauvery at Erode Near Chirapalayam
8	1323	River Cauvery at Velore Near Kattipalayam
9	1324	River Cauvery at Mohanur
10	1325	River Cauvery at Tiruchirappalli D/s
11	1326	River Cauvery at Coleroon, Tamilnadu
12	1327	River Cauvery at Pitchavaram
13	1451	River Cauvery at Thirumukkudal-confluence
14	3012	River Cauvery at Komarapalayam, Namakal
15	3013	River Cauvery at Urrachikottai
16	3014	River Cauvery at Vairapalayam, Namakal
17	3015	River Cauvery at Pugalur, Karur, Tamilnadu
18	3016	River Cauvery at Pettaivaithalai, Trichy
19	3017	River Cauvery at Kumbakonam, Thanjavur
20	3018	River Cauvery at Mayiladuthurai,
21	4827	River Locations at Kumarapalayam
22	10064	River Cauvery at Bhawani D/s
23	10065	River Cauvery at Erode U/s
24	10067	River Cauvery at Kumarapalayam U/s
25	10070	River Cauvery at Pallipalayam D/s
26	10073	River Cauvery at Karur U/s
27	10078	River Cauvery at Mayiladuthurai D/s

River Cauvery pH



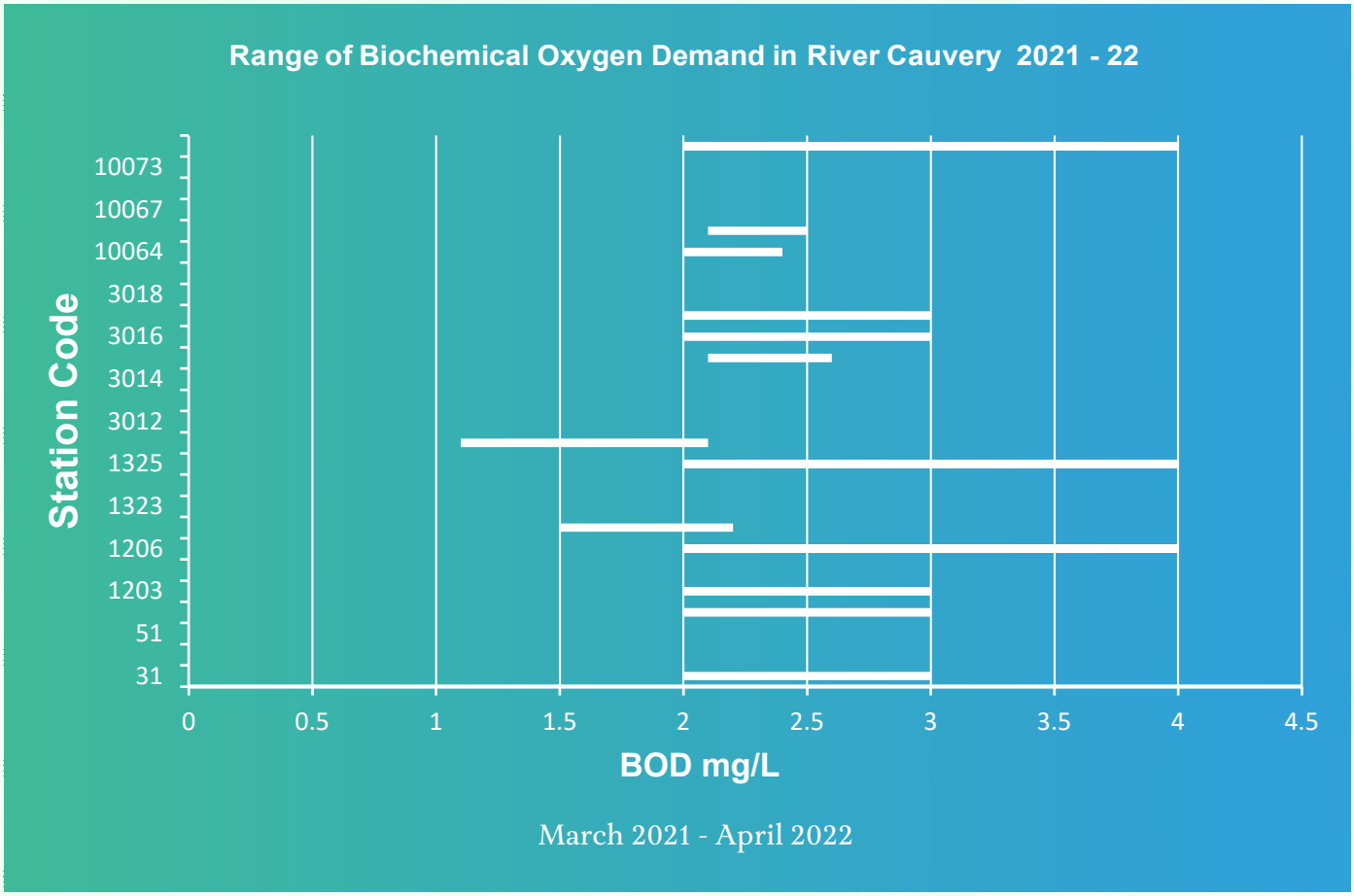
Most of the samples has pH above 6 throughout the year falling within range of 6.5 - 8.5

River Cauvery (DO)



All of the samples have DO above 5mg/L throughout the year which falls within range of 5 - 8.5mg/L

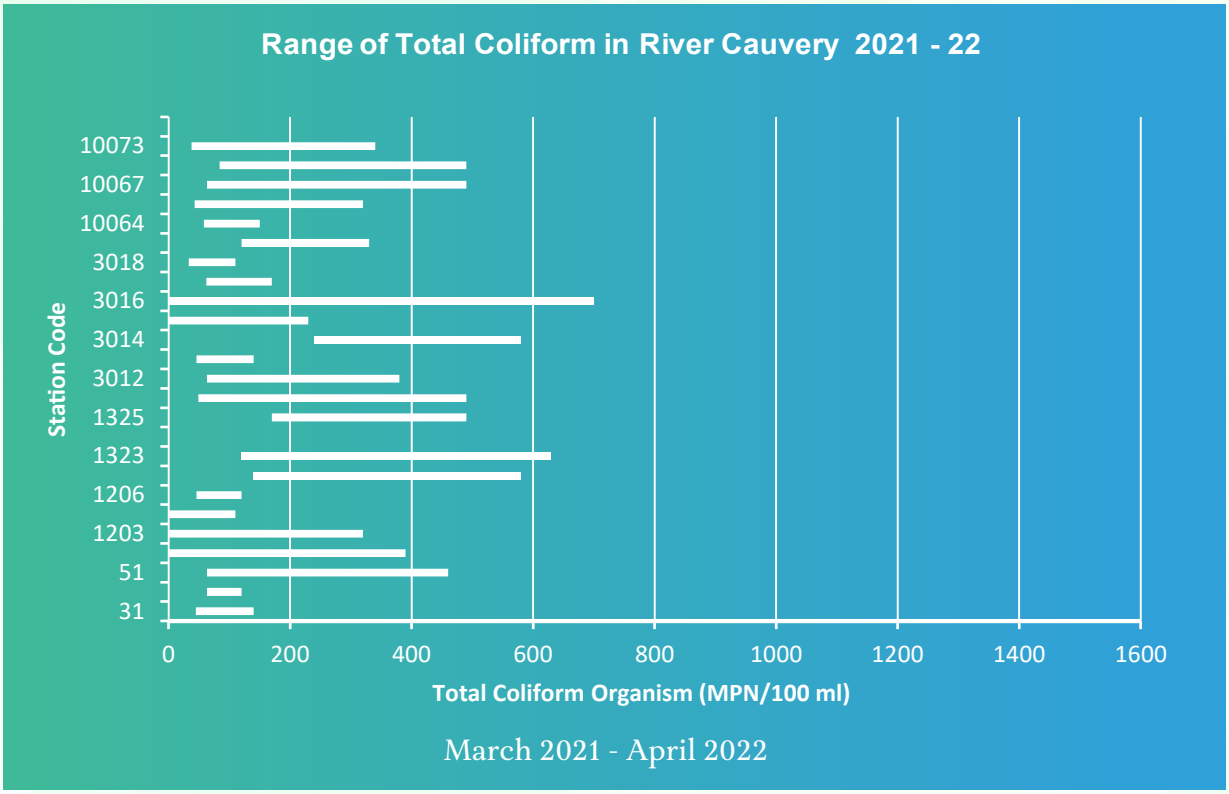
River Cauvery Biochemical Oxygen Demand



All stations were under 3mg/L or Less and falling below detection limit of 1mg/L majorly, except the below mentioned stations which were exceeding during **Pre - Monsoon Season**

Station code	Location
1325	River Cauvery At Tiruchirappalli D/s
1206	River Cauvery At Thanjavur, Tamilnadu
10078	River Cauvery At Mayiladuthurai D/s

River Cauvery Total Coliform

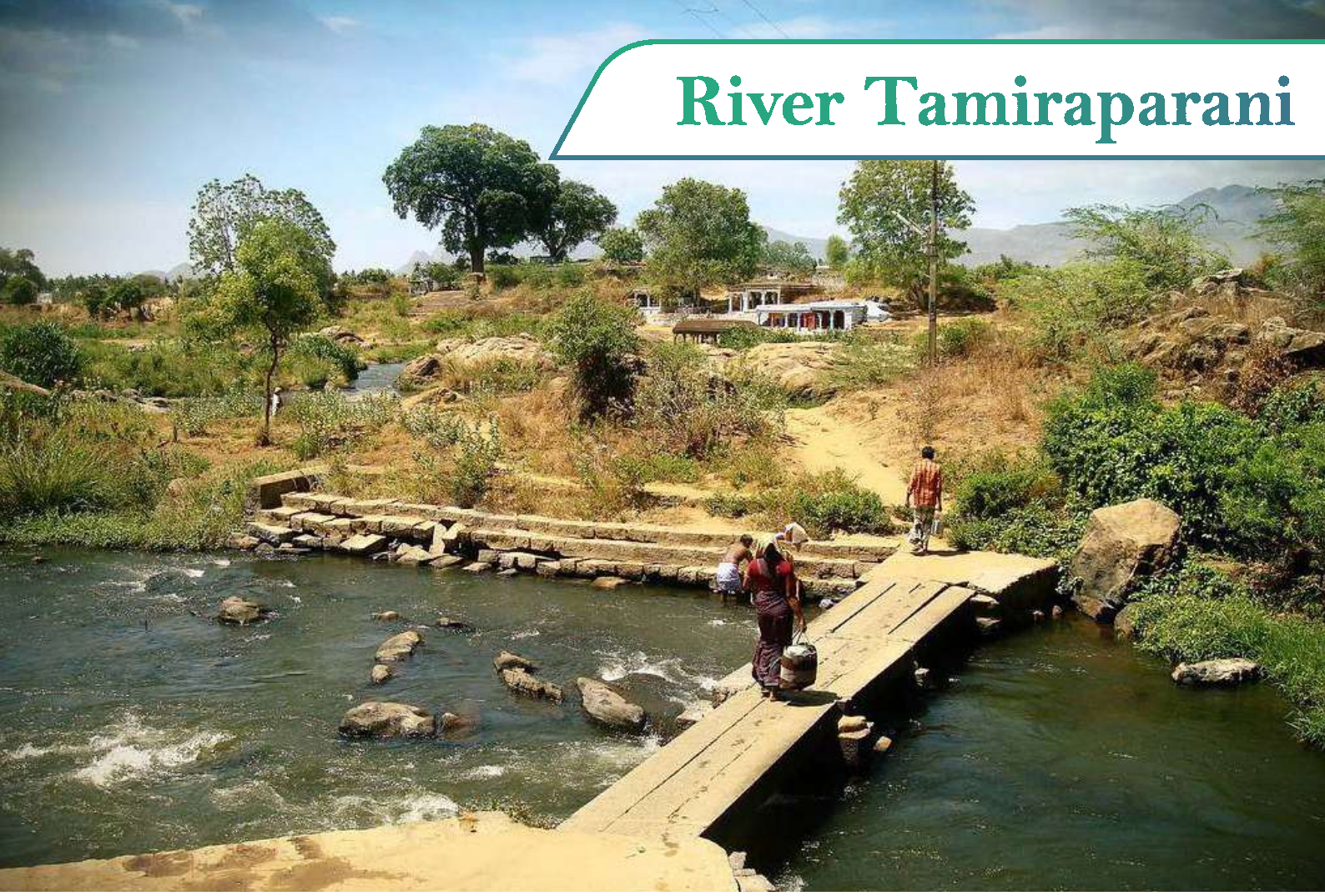


March 2021 - April 2022

All stations were under 500 MPN/100 ml or Less except below mentioned stations which were exceeding during **Pre - Monsoon Season** with Mohanur exceeding more number of times (8 times in 12 Months).

Station code	Location
1323	River Cauvery At Velore Near Kattipalayam
1324	River Cauvery At Mohanur
1325	River Cauvery At Tiruchirappalli D/s
3015	River Cauvery At Pugalur, Karur, Tamilnadu
3017	River Cauvery At Kumbakonam, Thanjavur

River Tamiraparani

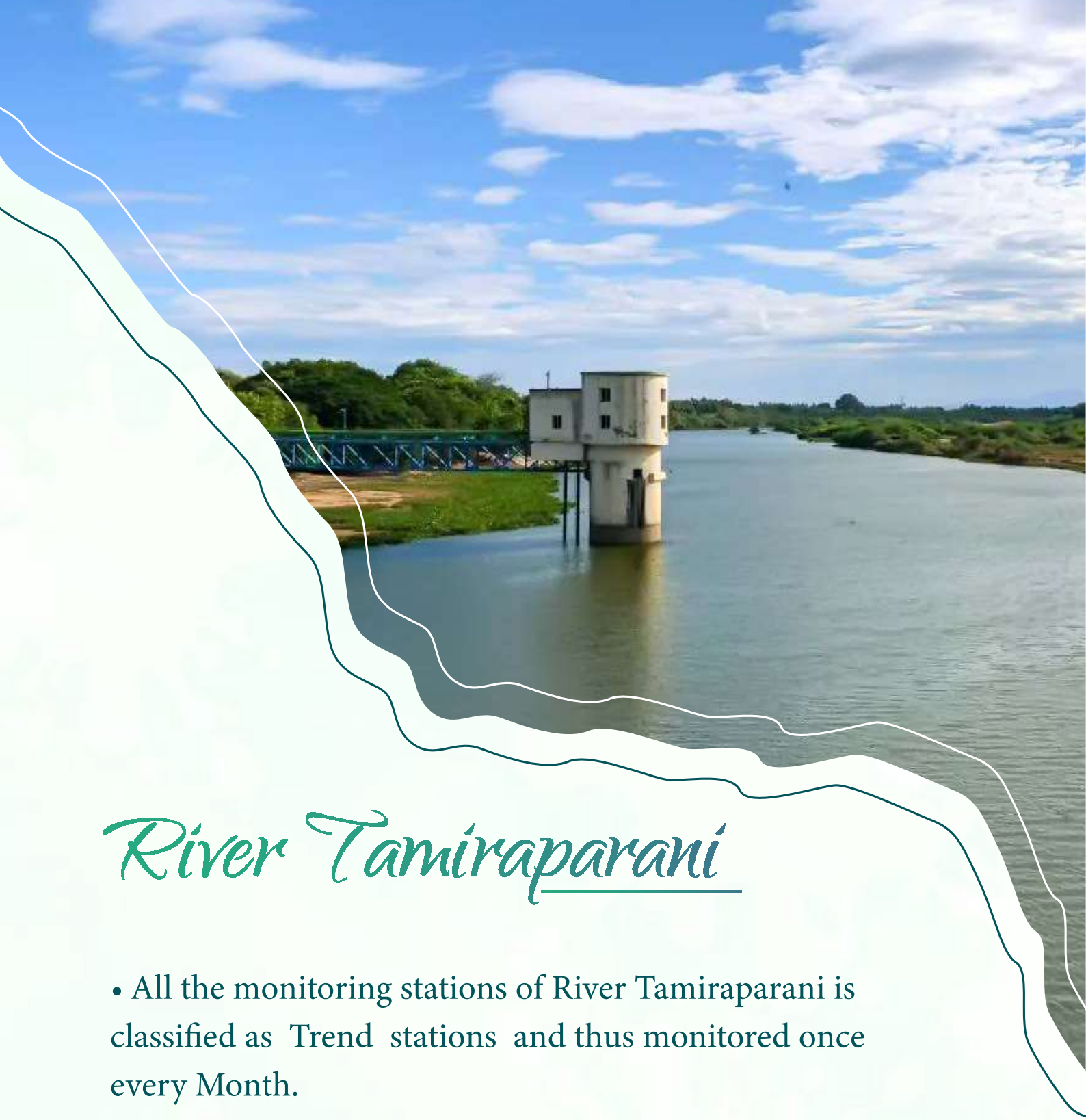


Stretches for about 126 Km in Tamil Nadu

Tamiraparani River originates in the Western Ghats and runs for a total distance of approximately 126 kilometers The river's source is located in the Pothigai hills, also known as the Agasthyamalai hills. The specific location is the eastern slopes of the Western Ghats in the Ambasamudram taluk of Tirunelveli district.

River flows in a generally eastward direction through the districts of Tirunelveli and Thoothukudi in Tamil Nadu. Tamiraparani River has several tributaries that join it along its course.

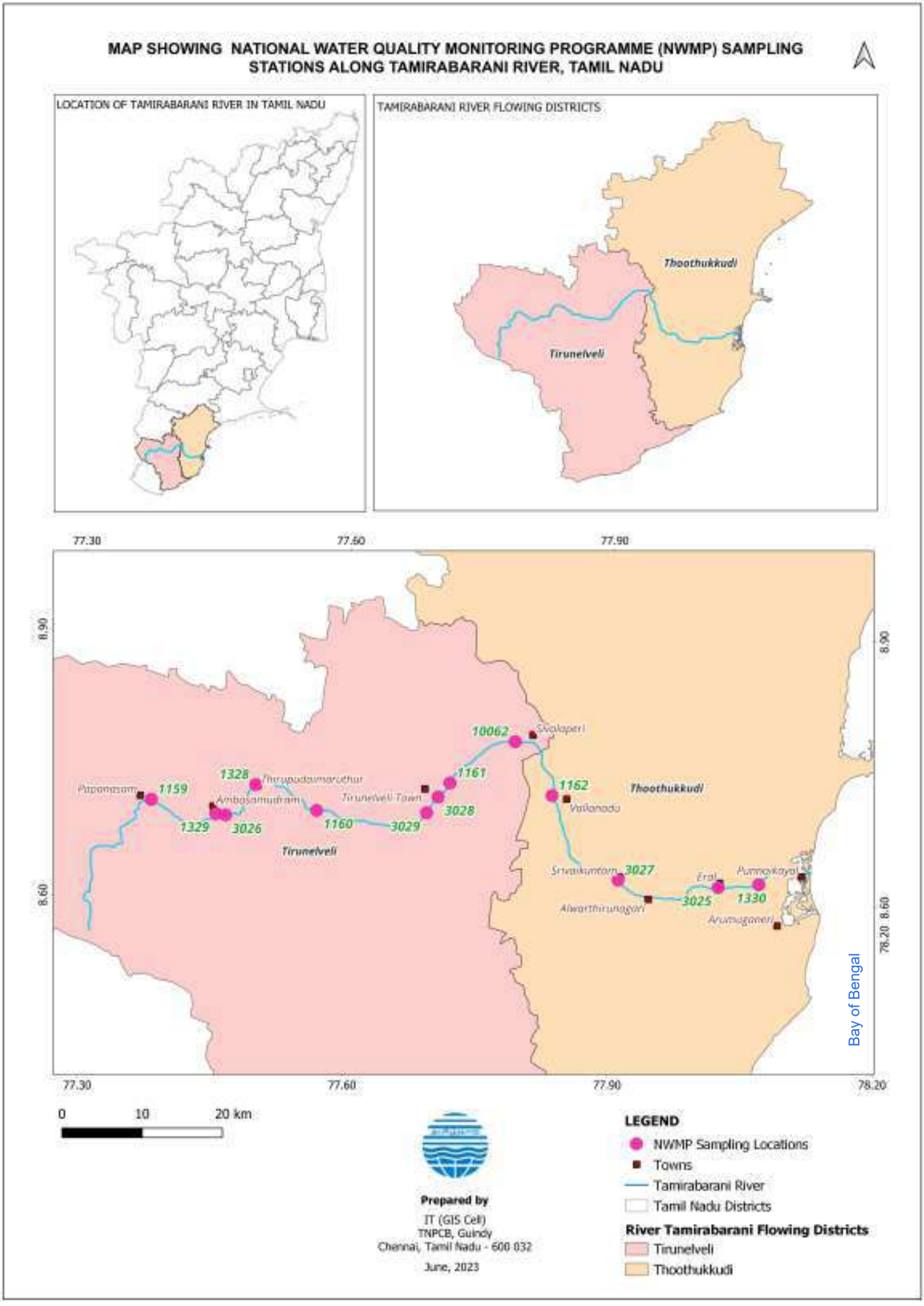
One of its major tributaries is the Chittar River, which joins the Tamiraparani near the town of Papanasam in Tirunelveli district. The river then flows through the towns of Ambasamudram, Palayamkottai, and Thoothukudi before finally reaching the Bay of Bengal.



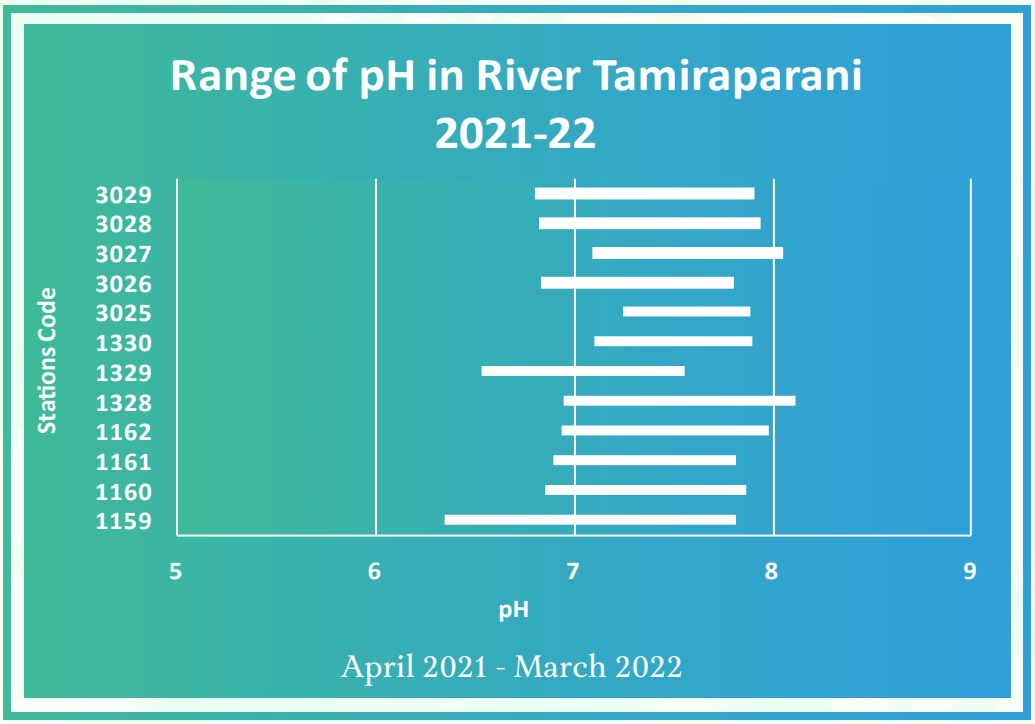
River Tamiraparani

• All the monitoring stations of River Tamiraparani is classified as Trend stations and thus monitored once every Month.

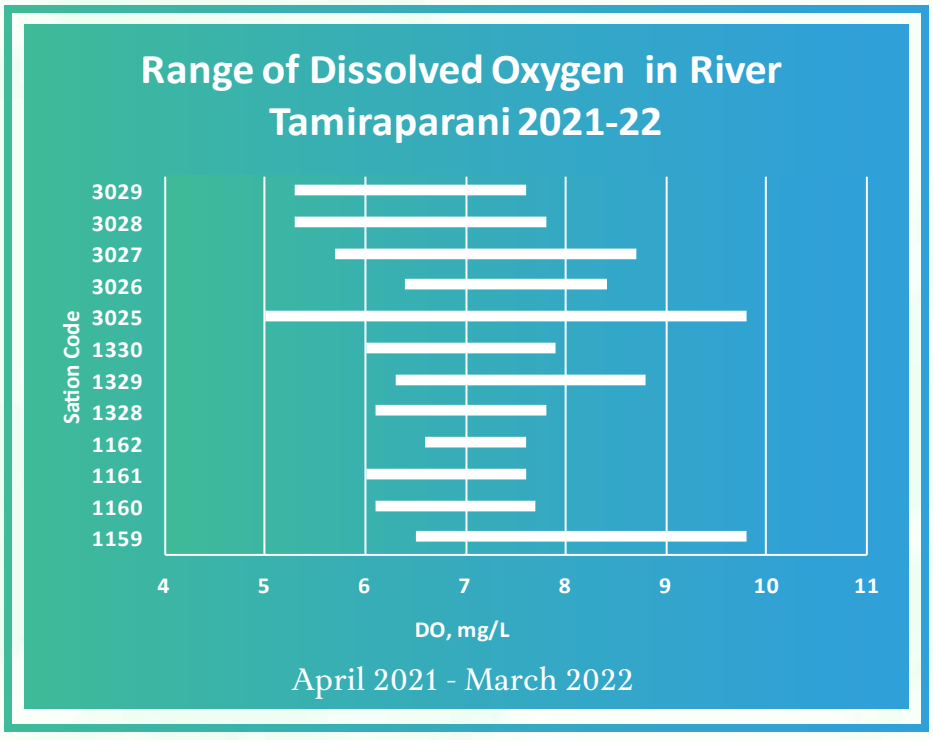
• The pH of the river falls between 6.5- 8.5, DO above 5 mg/L, Total Coliform less than 500 MPN/100ml in most stations and Biological Oxygen Demand ranging between 1- 3 mg/L


MAP SHOWING NATIONAL WATER QUALITY MONITORING PROGRAMME (NWMP) SAMPLING STATIONS ALONG TAMIRABARANI RIVER, TAMIL NADU
LOCATION OF TAMIRABARANI RIVER IN TAMIL NADU
TAMIRABARANI RIVER FLOWING DISTRICTS
Thoothukkudi
Tirunelveli
77.30
77.60
77.90
78.20
8.90
8.60
10062
Sivalaperi
1328
Thirupudaimarudhur
1161
1159
Papanasam
Tirunelveli Town
3028
Ambasamudram
1162
Thoothukkudi
1329
3026
1160
3029
Vallanadu
Tirunelveli
Srivaikuntam
3027
Eral
Punnakayal
1330
3025
Alwarthirunagari
Arumuganeri
Bay of Bengal
0
10
20 km
Prepared by
IT (GIS Cell)
TNPCB, Guindy
Chennai, Tamil Nadu - 600 032
June, 2023
LEGEND
NWMP Sampling Locations
Towns
Tamirabarani River
Tamil Nadu Districts
River Tamirabarani Flowing Districts
Tirunelveli
Thoothukkudi

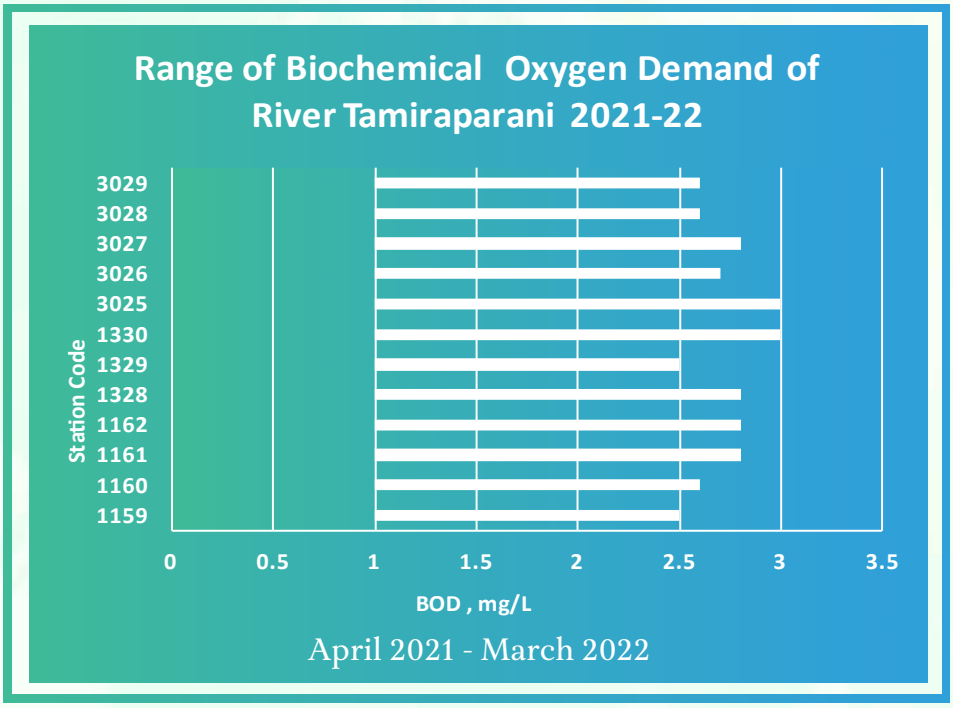
Sl.No	Station Code	Location Name
1	**1159**	River Tambiraparani at bdg.nr. Madura coats ltd.Papavinasam, Tamil Nadu
2	**1160**	River Tambiraparani at Cheranmadevi, cause way, Tamil Nadu
3	**1161**	River Tambiraparani at Tirunelveli, Collectorate, Tamil Nadu.
4	**1162**	River Tambiraparani at Murappanadu, Tamil Nadu
5	**1328**	River Tambiraparani at Thiruvidaimaruthur Tamil Nadu
6	**1329**	River Tambiraparani at rail bdg. nr. Ambasamudam, Tamil Nadu
7	**1330**	River Tambiraparani at Authoor Tamil Nadu
8	**3025**	River Tambiraparani at Eral, Thothukudi, Tamil Nadu
9	**3026**	River Tambiraparani at Kallidai kurichi, Tirunelveli, Tamil Nadu
10	**3027**	River Tambiraparani at Srivaikuntam, d/s of SK Anaicut, Tirunelveli, Tamil Nadu
11	**3028**	River Tambiraparani at Vellakoil, Tirunelveli, Tamil Nadu
12	**3029**	River Tambiraparani at Sivalaperi, confluence point of Kuttralam falls, d/s of Palayamkottai, Tirunelveli, Tamil Nadu
13	**10062**	River Tambiraparani at Tirunelveli d/s



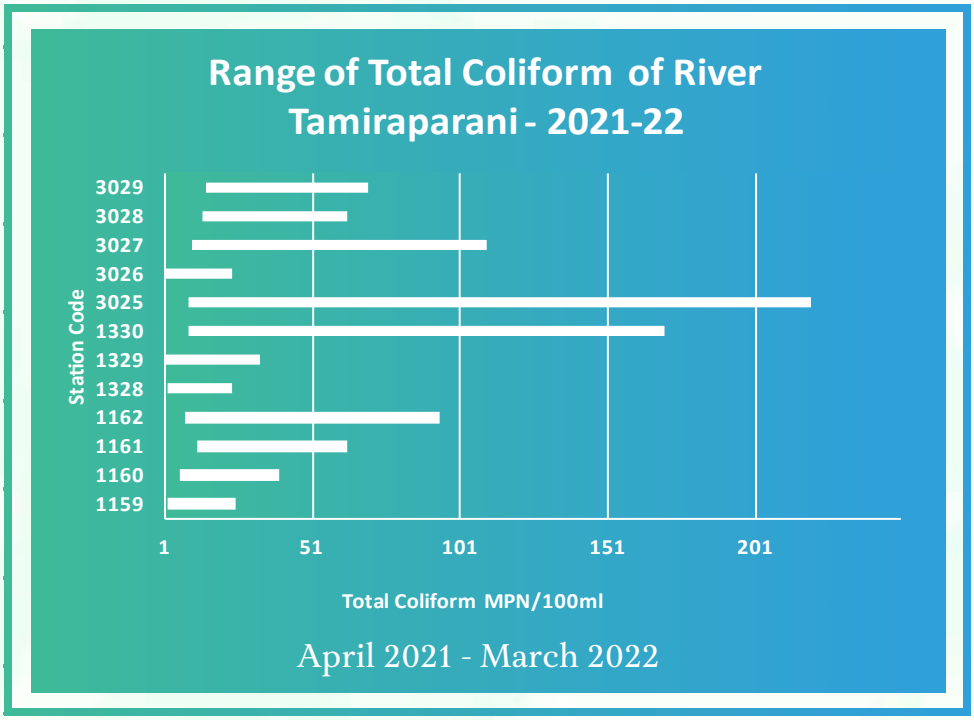
pH in most stations of river Tamiraparani falls between the range of 6.5 – 8.5.



Dissolved Oxygen of most stations of river Tamiraparani falls above 5 mg/L.



BIOCHEMICAL OXYGEN DEMAND of most stations of river Tamiraparani are under / below (3 mg/L) and some stations falls below detection limit of 1mg/L.



Total Coliform of most stations of river Tamiraparani falls under the range 500 MPN /100 mL.

River Cooum

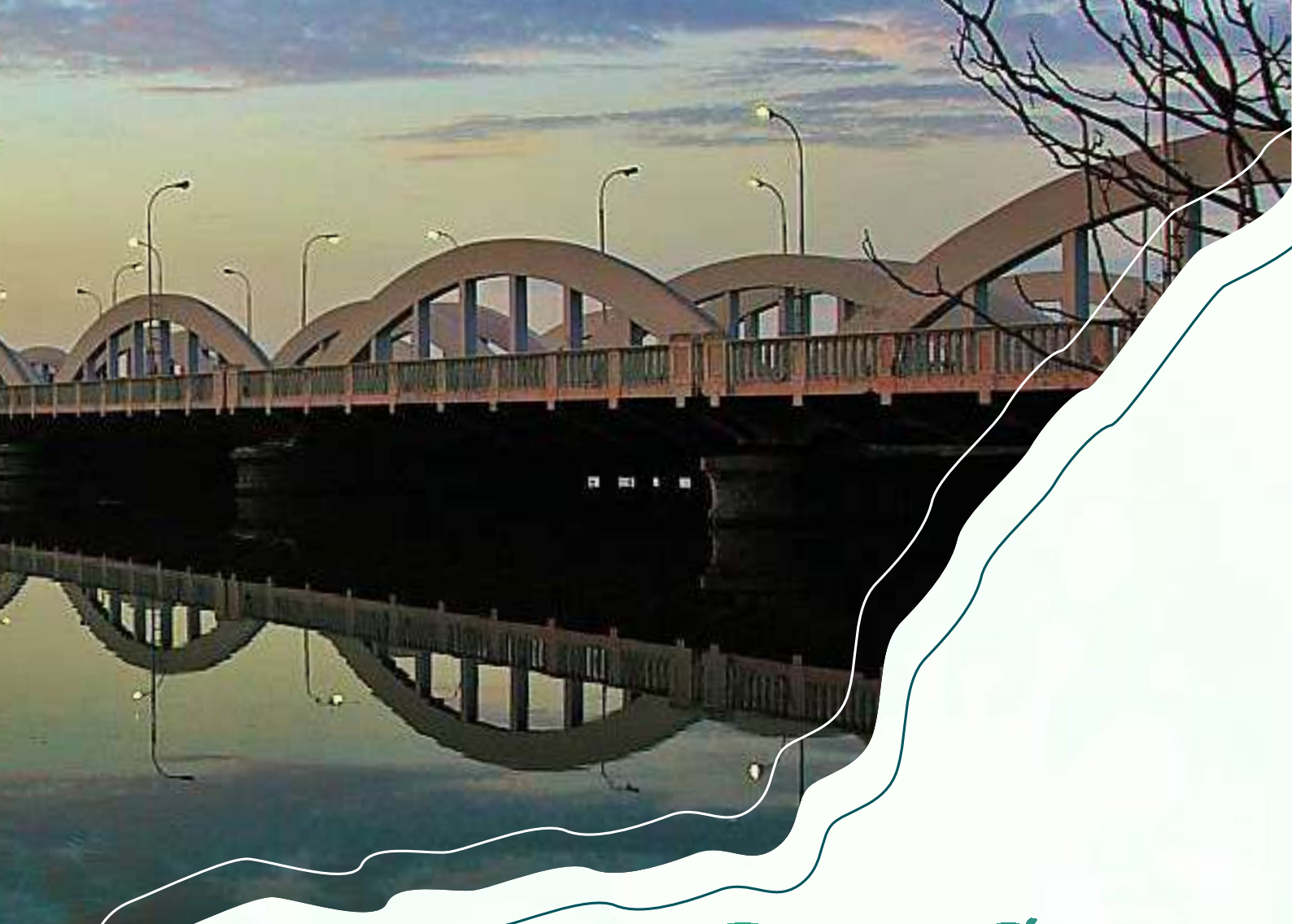
Stretches for about 64 Km

The river originates at Cooum village in Kadambathur union in Tiruvallur district.

It enters the Chennai district at Arumbakkam.

It passes through some of the oldest residential areas for another 18 kilometres such as Choolaimedu, Chetpet, Egmore and Chintadripet.

Close to Egmore, the river parts into two – the northern and the southern arms – both of which join again near the Napier bridge, forming the island grounds and reaches Bay of Bengal south of the Fort St George.



River Cooum

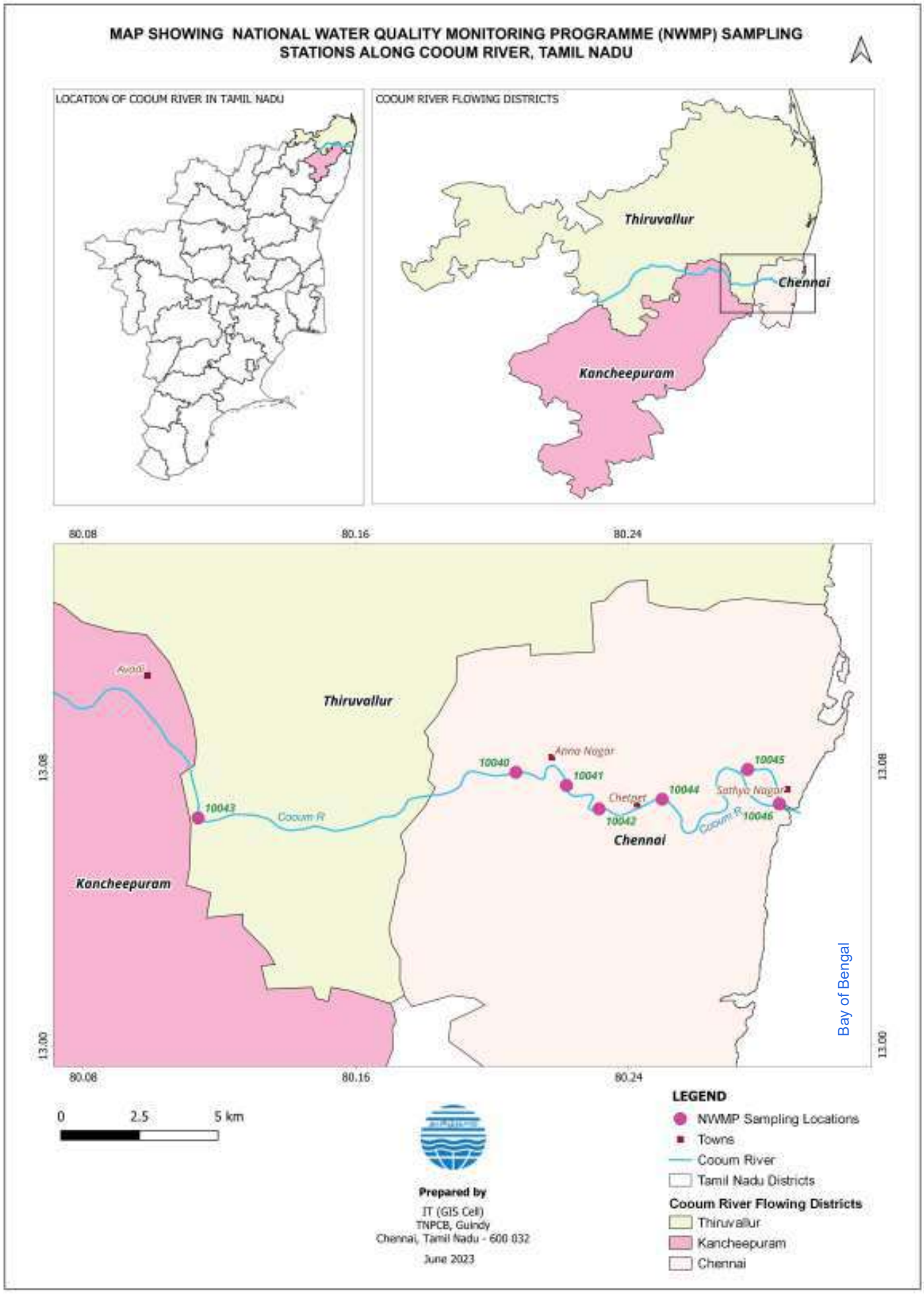
- DO are Below Detectable Limit (BDL) of 0.3 mg/L during pre monsoon season. DO is an essential indicator of water quality that denotes the survival of fishes and other aquatic organism and should be above 4mg/L.

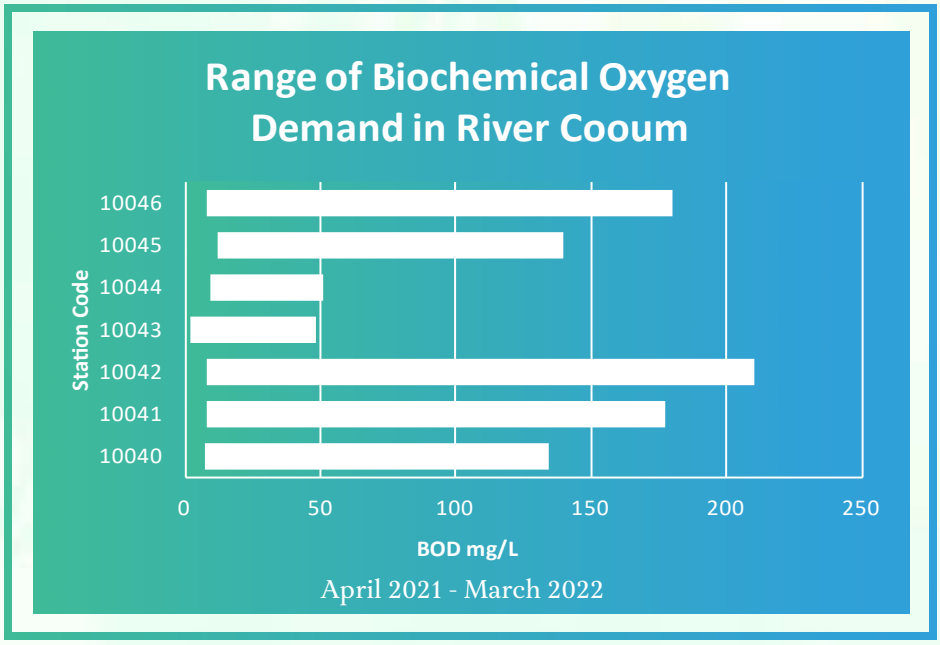
- BOD values are higher through out the year.

- It is also noted that the electrical conductivity is high in all locations indicating the presence of salts.

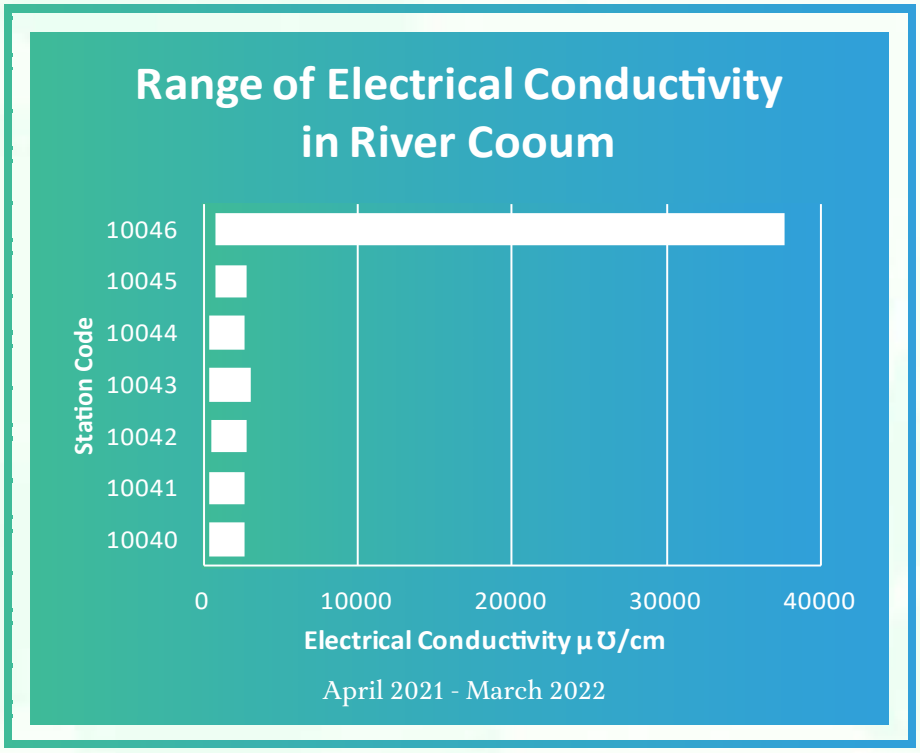
Station Code	Location details
10040	River Cooum at Anna nagar
10041	River Cooum at Arumbakkam
10042	River Cooum at Aminjikarai
10043	River Cooum at Poonamalle
10044	River Cooum at College road
10045	River Cooum near Central jail
10046	River Cooum at Napier bridge

Sampling Location under NWMP


MAP SHOWING NATIONAL WATER QUALITY MONITORING PROGRAMME (NWMP) SAMPLING STATIONS ALONG COOUM RIVER, TAMIL NADU
LOCATION OF COOUM RIVER IN TAMIL NADU
COOUM RIVER FLOWING DISTRICTS
Thiruvallur
Chennai
Kancheepuram
80.08
80.16
80.24
13.08
13.00
Avadi
Thiruvallur
Anna Nagar
10040
10041
10045
10043
Cooum R
Chetpet
10044
Sathya Nagar
10042
10046
Chennai
Kancheepuram
Bay of Bengal
0
2.5
5 km
Prepared by
IT (GIS Cell)
TNPCB, Guindy
Chennai, Tamil Nadu - 600 032
June 2023
LEGEND
NWMP Sampling Locations
Towns
Cooum River
Tamil Nadu Districts
Cooum River Flowing Districts
Thiruvallur
Kancheepuram
Chennai



BOD values of all the 7 stations have exceeded the Designated Best Use criteria and the water quality does not fit into any Class defined by CPCB



The electrical conductivity have exceeded many times than the max limit of Class E Water Quality Criteria.

River Adyar

Stretches for about 42 Km

The Adyar River is a significant water body located in the state of Tamil Nadu, India. It originates in the Coumbedu village in the western part of Chennai and flows Eastward for about 42 kilometers before emptying into the Bay of Bengal.

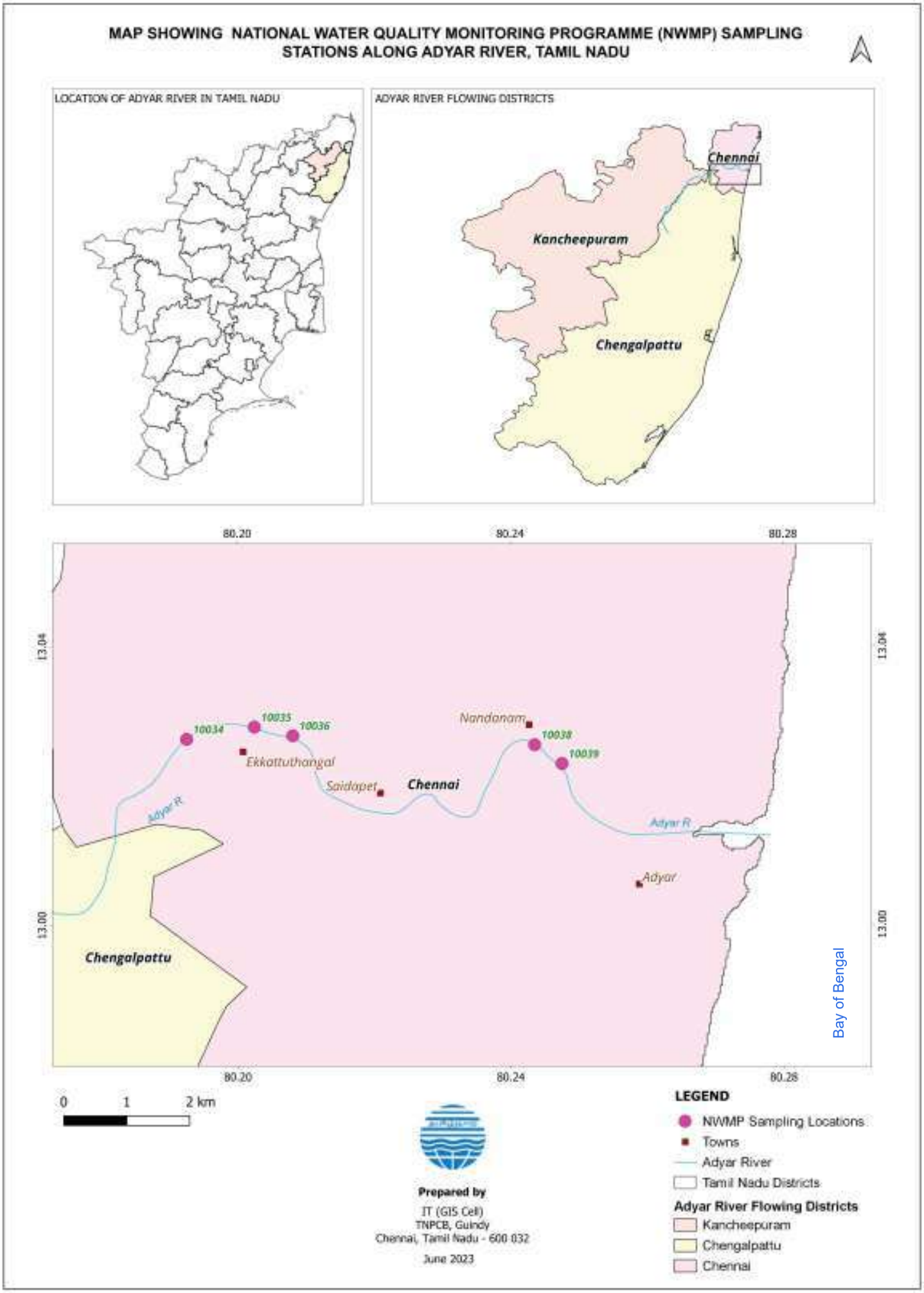
The river passes through several prominent neighborhoods of Chennai, including Saidapet, Guindy, and Adyar, from which it derives its name.

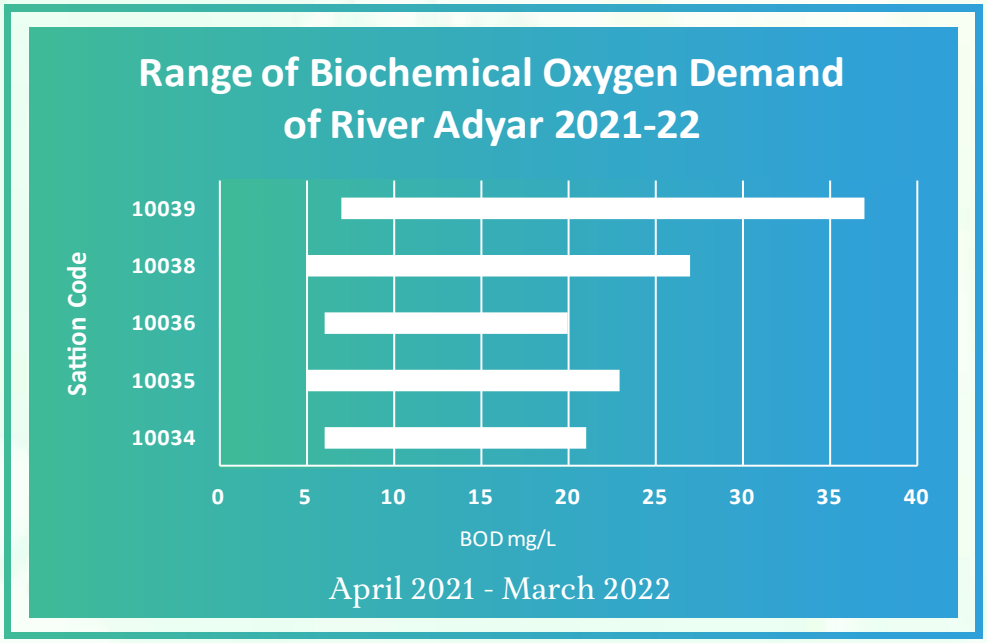
Station Code	Location
10034	River Adyar at Ekkattuthangal
10035	River Adyar At Jaferkhanpet
10036	River Adyar At Maraimalai Bridge
10038	River Adyar At Kotturpuram Bridge
10039	River Adyar Near Boat Club

River Adyar

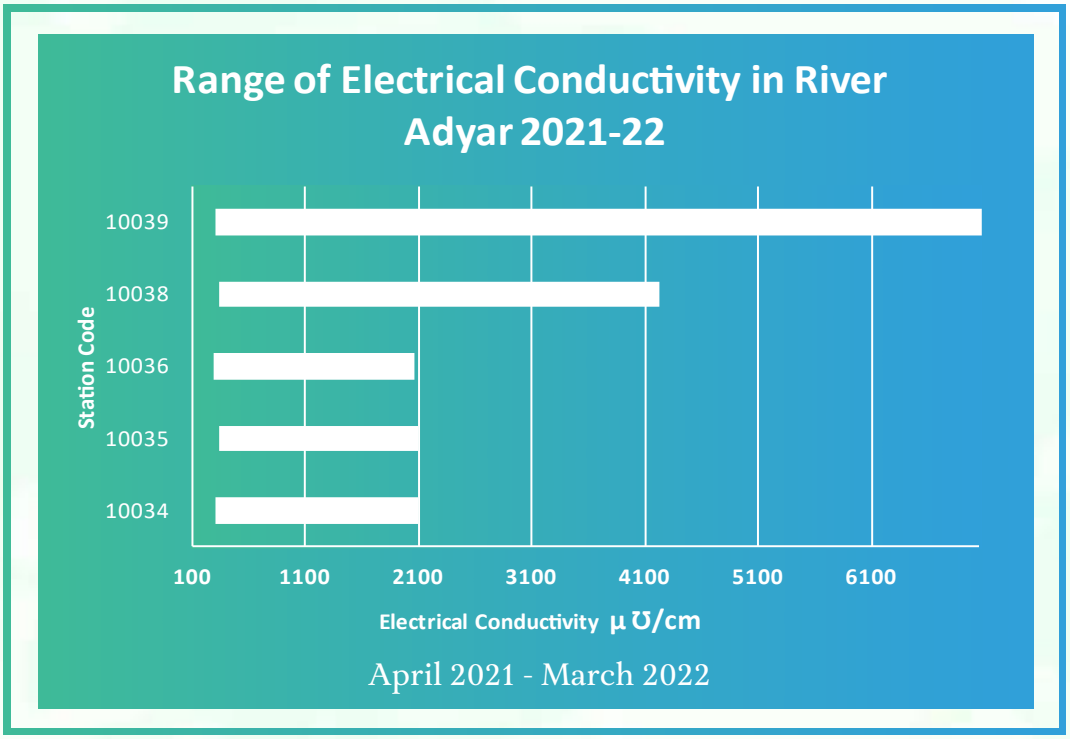
- The river exhibits low Dissolved Oxygen which is basic requirement for organisms to live and high BOD values above the maximum permissible limit.

- It is also noted that the electrical conductivity is high in all location indicating the presence of salts.


MAP SHOWING NATIONAL WATER QUALITY MONITORING PROGRAMME (NWMP) SAMPLING STATIONS ALONG ADYAR RIVER, TAMIL NADU
LOCATION OF ADYAR RIVER IN TAMIL NADU
ADYAR RIVER FLOWING DISTRICTS
Chennai
Kancheepuram
Chengalpattu
80.20
80.24
80.28
13.04
13.00
10034
10035
10036
10038
10039
Nandanam
Ekkattuthangal
Saidapet
Chennai
Adyar R.
Adyar
Chengalpattu
Bay of Bengal
0
1
2 km
LEGEND
NWMP Sampling Locations
Towns
Adyar River
Tamil Nadu Districts
Adyar River Flowing Districts
Kancheepuram
Chengalpattu
Chennai
Prepared by
IT (GIS Cell)
TNPCB, Guindy
Chennai, Tamil Nadu - 600 032
June 2023



BOD values of all the 5 stations exceeded the Designated Best Use criteria and the water quality does not fit into any Class defined by CPCB making the river unfit for any use.



Electrical Conductivity exceeded many times than the max limit of Class E Water Quality Criteria.

Bhavani River originates from the Nilgiri Hills, which are part of the Western Ghats mountain range. It emerges from a place called Mukurthi Peak, situated at an elevation of around 2,554 meters (8,379 feet) above sea level.

The river originates in the Silent Valley National Park in Kerala and flows through the states of Kerala and Tamil Nadu.

River Bhavani

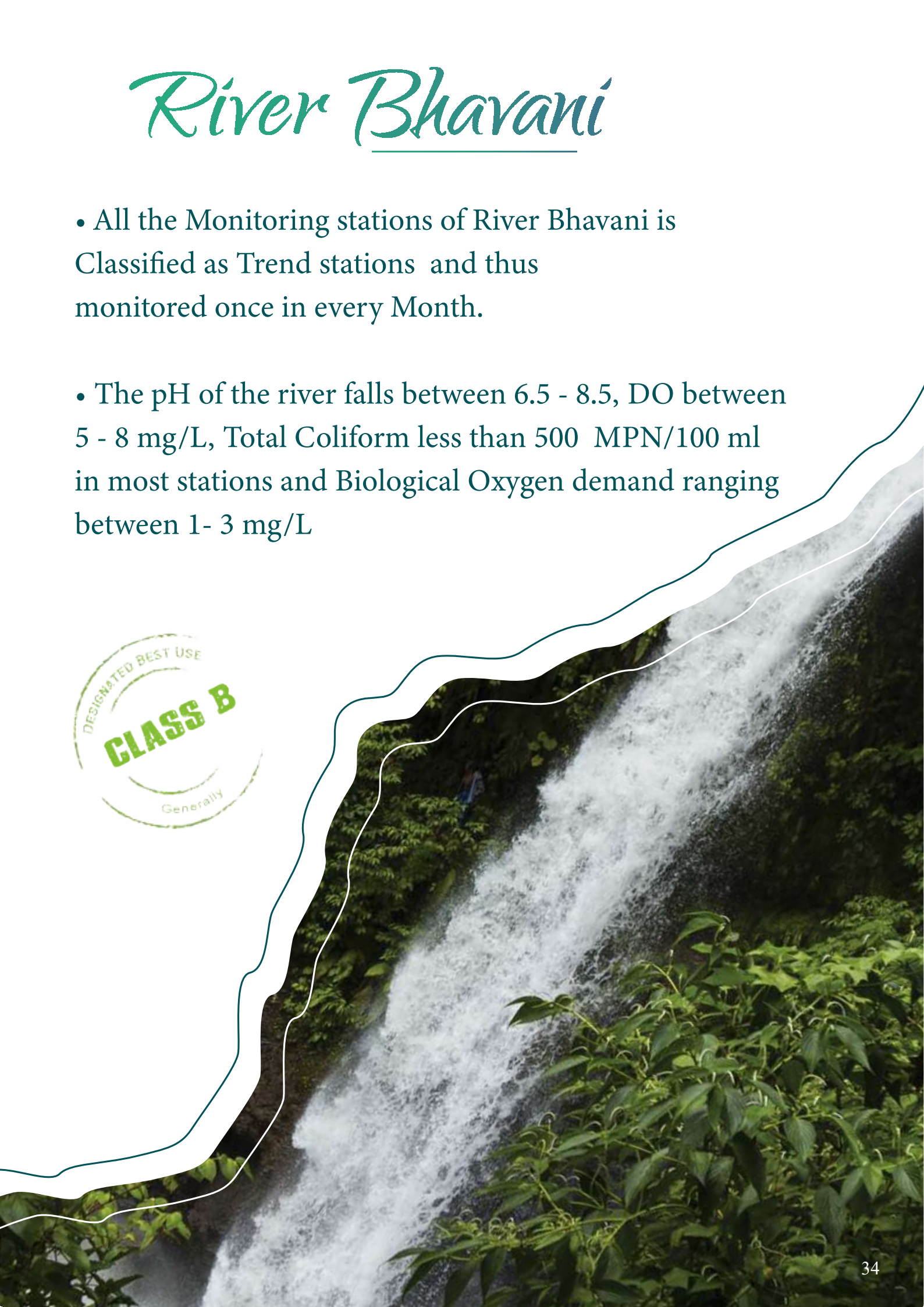
The Bhavani River flows eastward, traversing a distance of approximately 217 kilometers (135 miles) before it joins the Caveri River near the town of Kodumudi in Tamil Nadu. Along its course, the river passes through several districts, including Coimbatore and Erode. It serves as a significant tributary of the Caveri River, which is one of the major rivers in southern India.

The confluence of the Bhavani and Caveri Rivers is known as "Kooduthurai" or "Kooduthalai," and it is considered a sacred spot by the local communities. After merging with the Caveri, the combined river continues its journey towards the Bay of Bengal, ultimately reaching the ocean near the town of Poompuhar in Tamil Nadu.

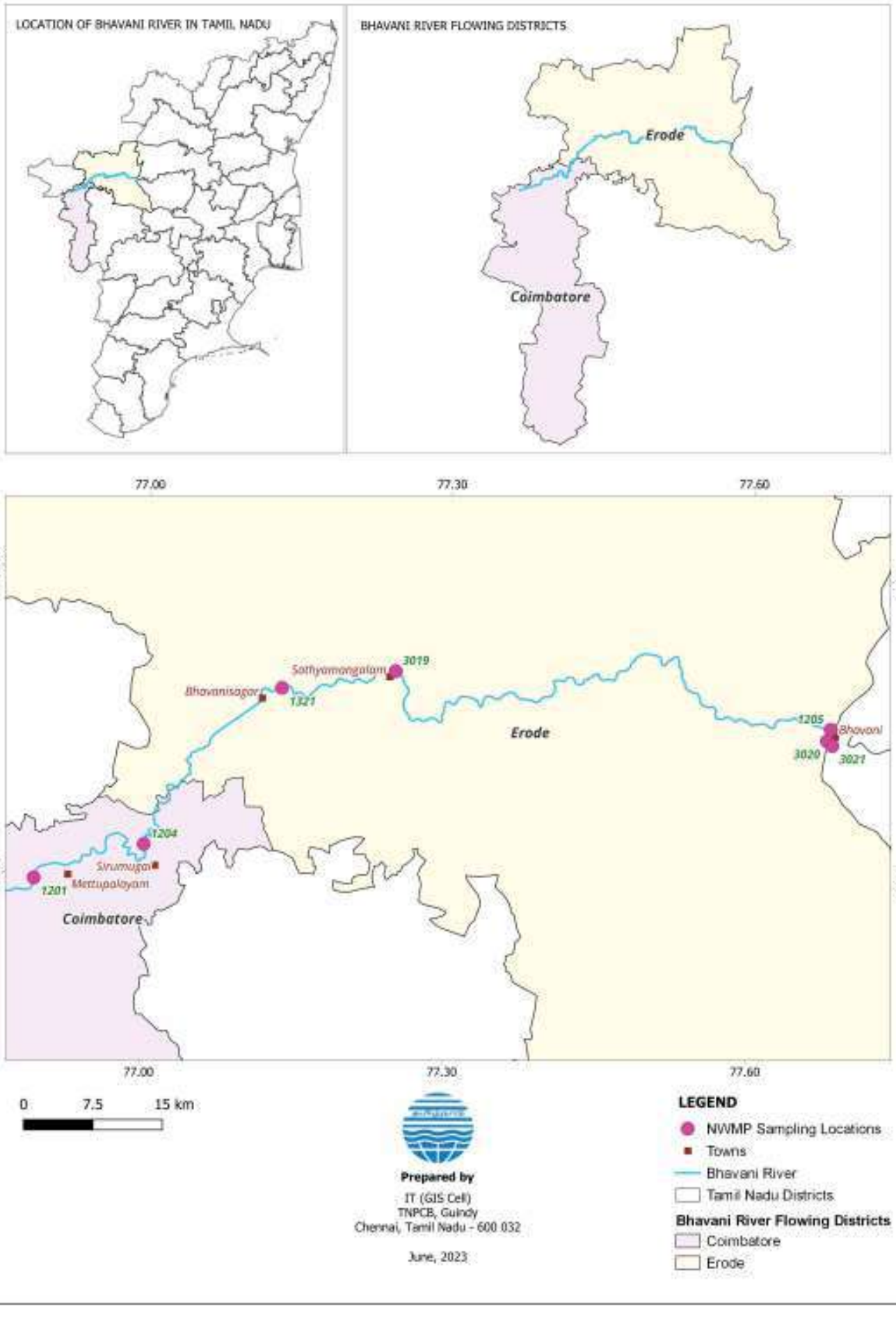
River Bhavani

• All the Monitoring stations of River Bhavani is Classified as Trend stations and thus monitored once in every Month.

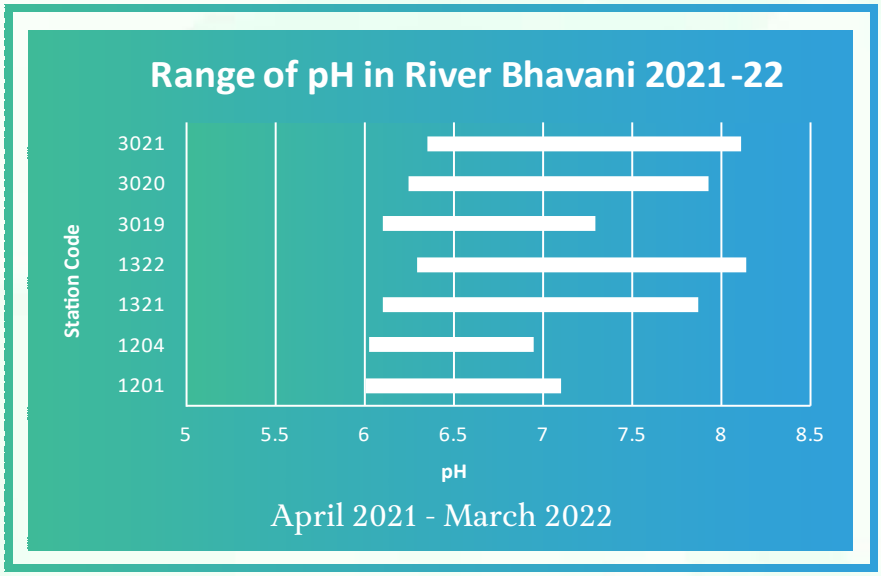
• The pH of the river falls between 6.5 - 8.5, DO between 5 - 8 mg/L, Total Coliform less than 500 MPN/100 ml in most stations and Biological Oxygen demand ranging between 1- 3 mg/L



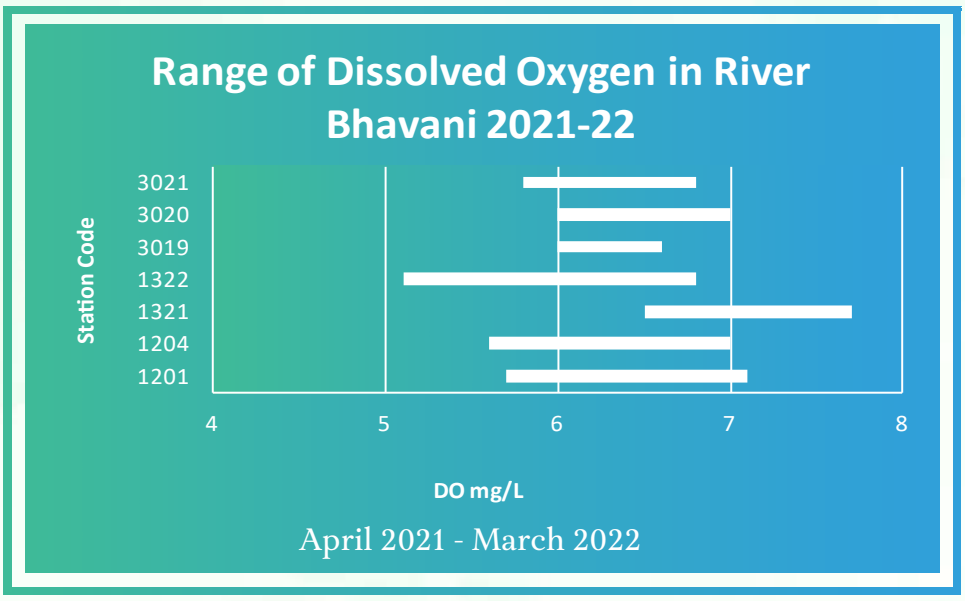
MAP SHOWING NATIONAL WATER QUALITY MONITORING PROGRAMME (NWMP) SAMPLING STATIONS ALONG BHAVANI RIVER, TAMIL NADU



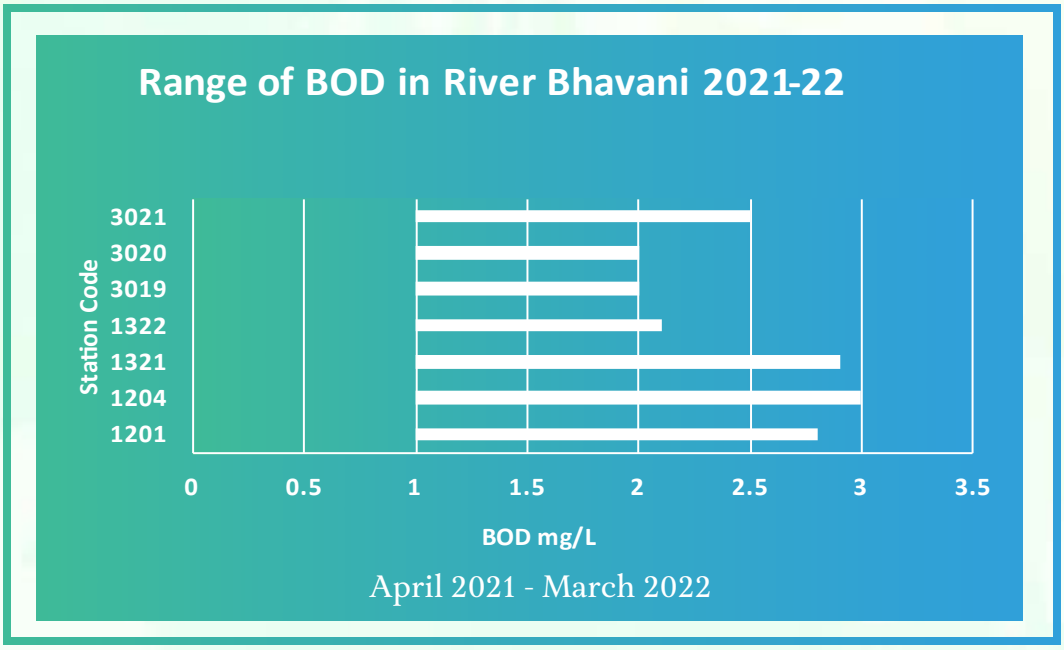
Station Code	Location
1201	River Bhavani at Badtharakaliamman Koil, Tamilnadu
1204	River Bhavani at Sirumugai, Tamilnadu
1321	River Bhavani at Bhavani Sagar, Tamilnadu
1322	River Cauvery at 1km. D/s of Bhavani confl.,R.N. Pundur, Tamilnadu
3019	River Bhavani at d/s of Bhavani Sagar, Sathyamangalam, Erode, Tamilnadu
3020	River Bhavani at u/s of Kalingarayan Canal (B5), Erode, Tamilnadu
3021	River Bhavani at d/s of Kalingarayan Canal (B10), Erode, Tamilnadu



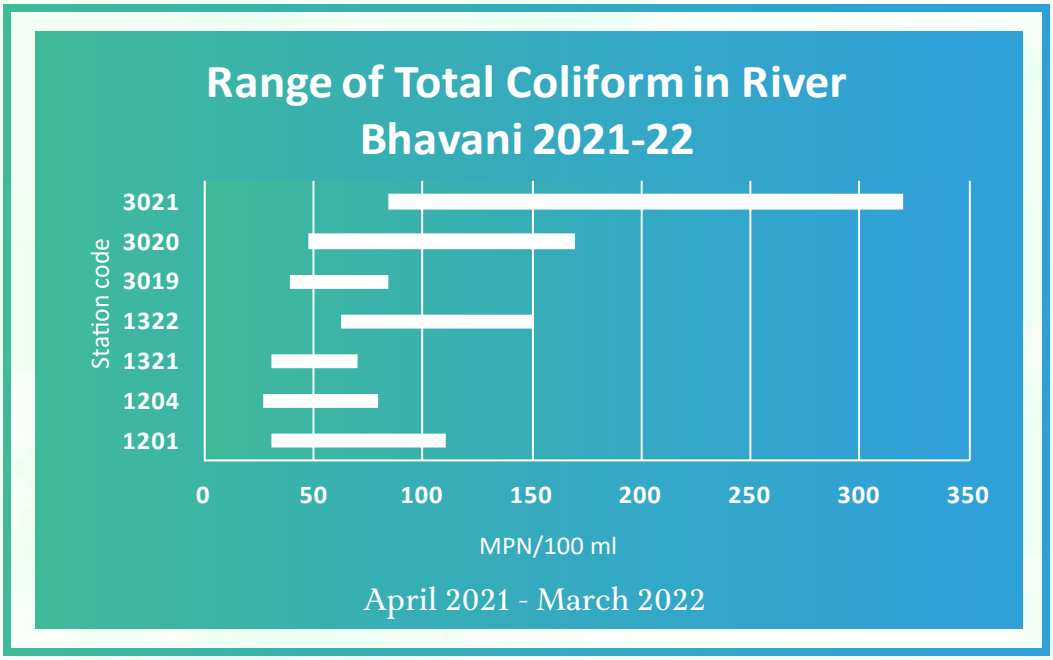
pH have ranged between 6.5 to 8.5 all through the year.



DO have ranged between 5 to 8 mg/L all through the year indicating the water to be having sufficient Dissolved Oxygen for maintaining the health of river.



All stations were under the range of 1 - 3 mg/L and falling below detection limit of 1mg/L except the station 1322 - River Cauvery at 1km. D/s of Bhavani confl., R.N. Pudur, Tamil Nadu exceeded during **monsoon season** due to large number of pilgrimage (Sabarimalai) activity found near the sampling location during winter holidays.



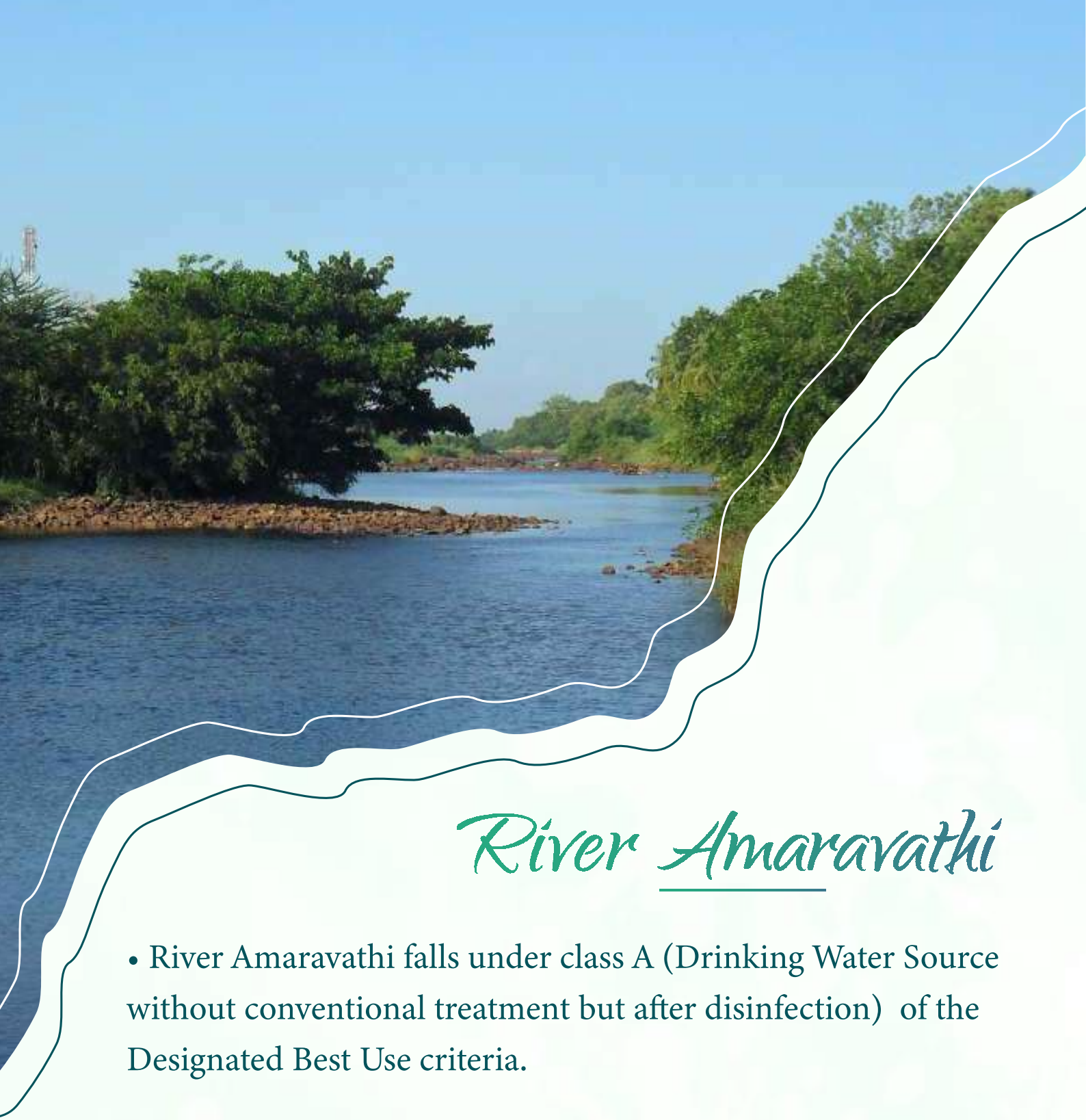
Total Coliform in all the stations were less than 500 MPN/100 ml. Total coliform reduced during monsoon season due to natural dilution.

River Amaravathi

The Amaravathi river also known as Aanporunai in Tamil Nadu originates from the Anaimalai Hills of the Western Ghats in the Coimbatore district. It is formed by the confluence of the Kallapuram river and the Uppar rivers near the village of Amaravathinagar.

As the Kallapuram river and Uppar rivers merge, they combine their flow and form the Amaravathi river. From this confluence point near Amaravathinagar, the Amaravathi river begins its journey, flowing eastward through the districts of Tiruppur, Karur, and Dindigul in Tamil Nadu before eventually joining the Kaveri River.

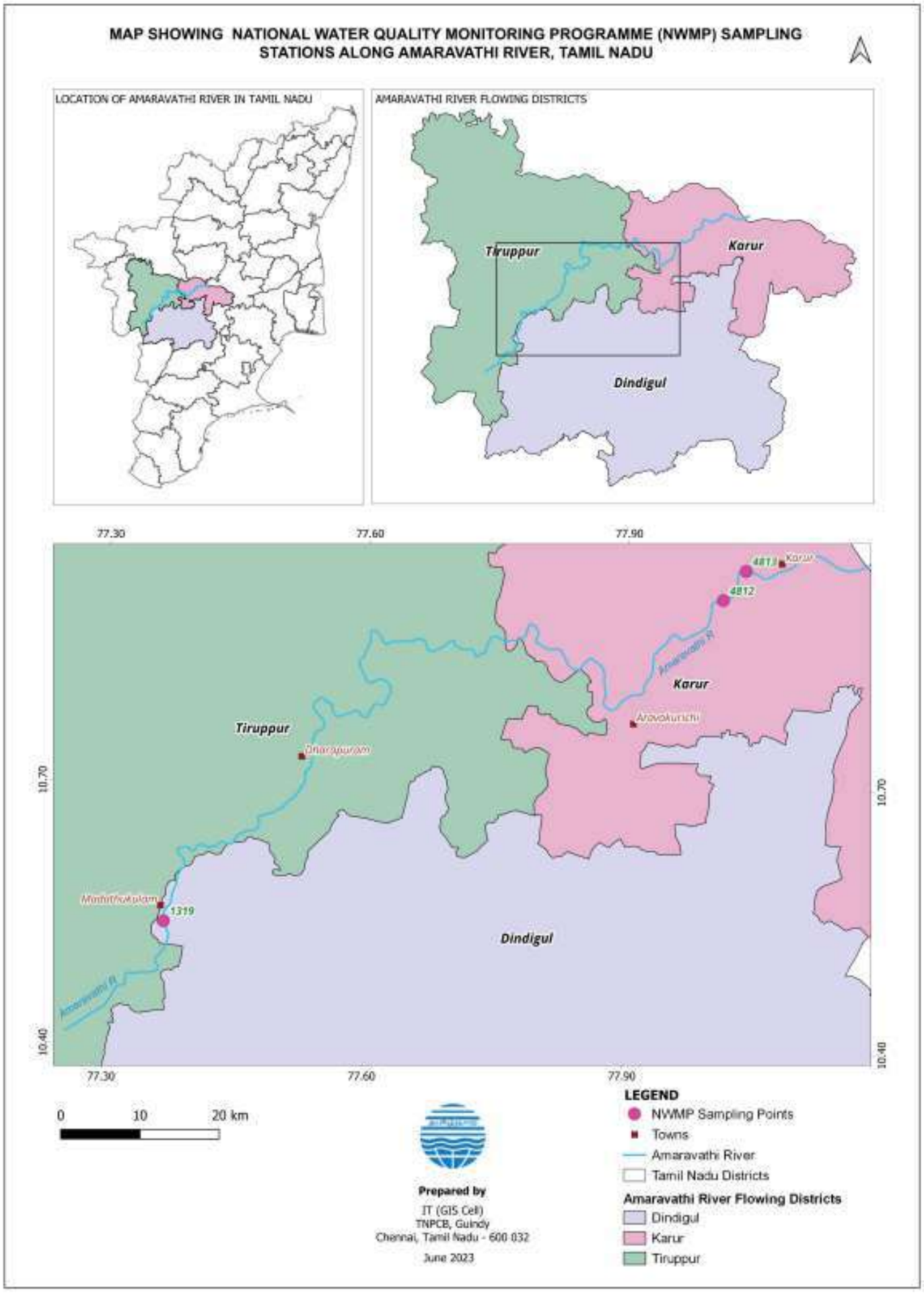
From its origin, the Amaravathi river flows in an easterly direction through the districts of Tiruppur, Karur, and Dindigul in Tamil Nadu.



River Amaravathi

• River Amaravathi falls under class A (Drinking Water Source without conventional treatment but after disinfection) of the Designated Best Use criteria.

• The pH of the river falls between 6.5- 8.5, DO above 6 mg/L, Total Coliform less than 50 MPN/100ml in most stations and Biological Oxygen Demand ranging between 1- 3 mg/L.


MAP SHOWING NATIONAL WATER QUALITY MONITORING PROGRAMME (NWMP) SAMPLING STATIONS ALONG AMARAVATHI RIVER, TAMIL NADU
LOCATION OF AMARAVATHI RIVER IN TAMIL NADU
AMARAVATHI RIVER FLOWING DISTRICTS
Tiruppur
Karur
Dindigul
77.30
77.60
77.90
10.70
10.40
4813
Karur
4812
Amaravathi R
Karur
Aravakurichi
Tiruppur
Dharapuram
Madathukulam
1319
Dindigul
Amaravathi R
0
10
20 km
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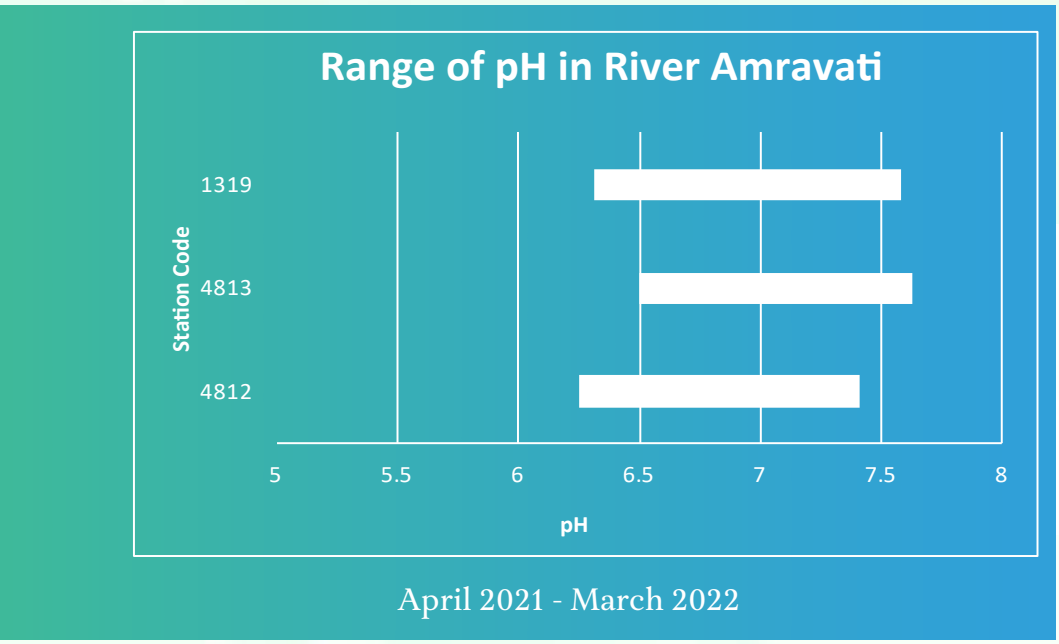
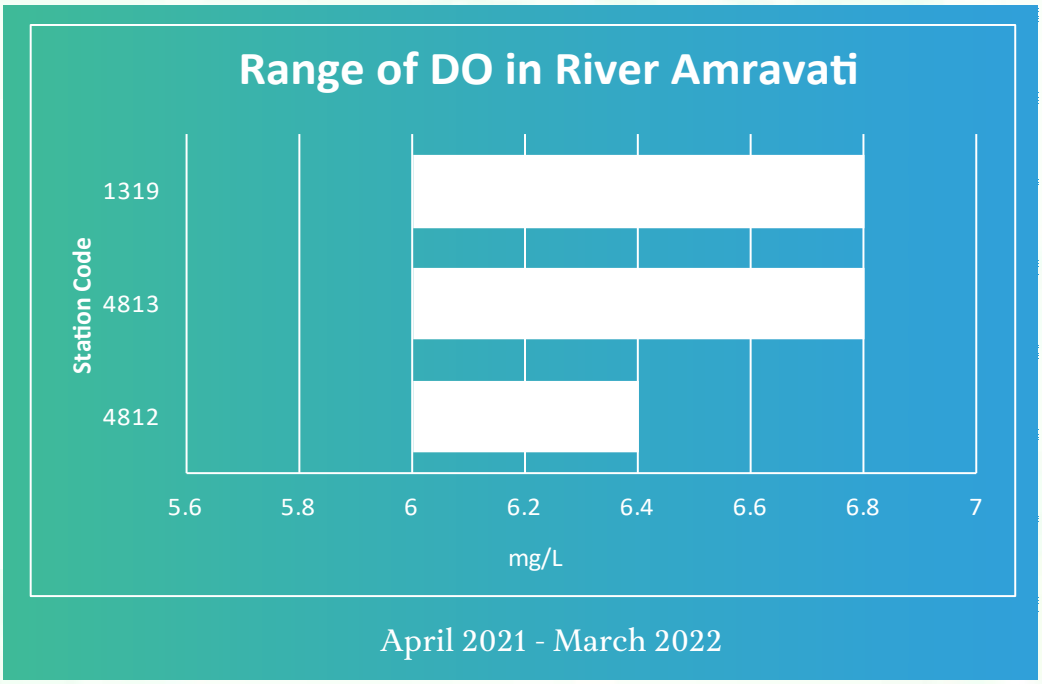
IT (GIS Cell)
TNPCB, Guindy
Chennai, Tamil Nadu - 600 032
June 2023
LEGEND
NWMP Sampling Points
Towns
Amaravathi River
Tamil Nadu Districts
Amaravathi River Flowing Districts
Dindigul
Karur
Tiruppur

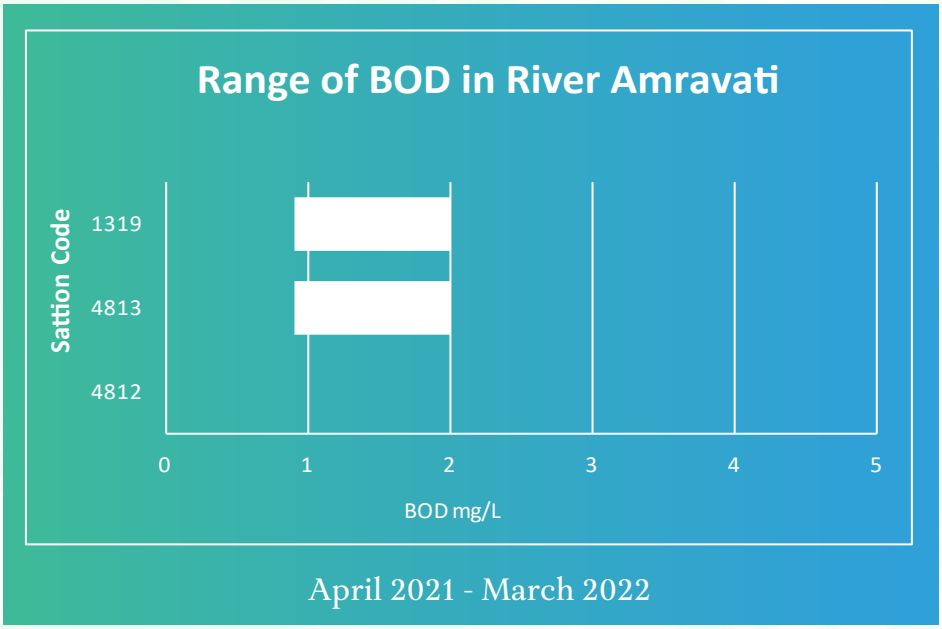
Staions Code	Location Name
4812	River located on the southern bank of Amaravathi and downstream side of Karur dyeing cluster
4813	River located adjacent to karur MSW dump site and on the northern bank of Amaravathi and downstream side of karur dyeing cluster
1319	River Amravati at 1km d/s from effluent discharge point at Madhuthukkulam



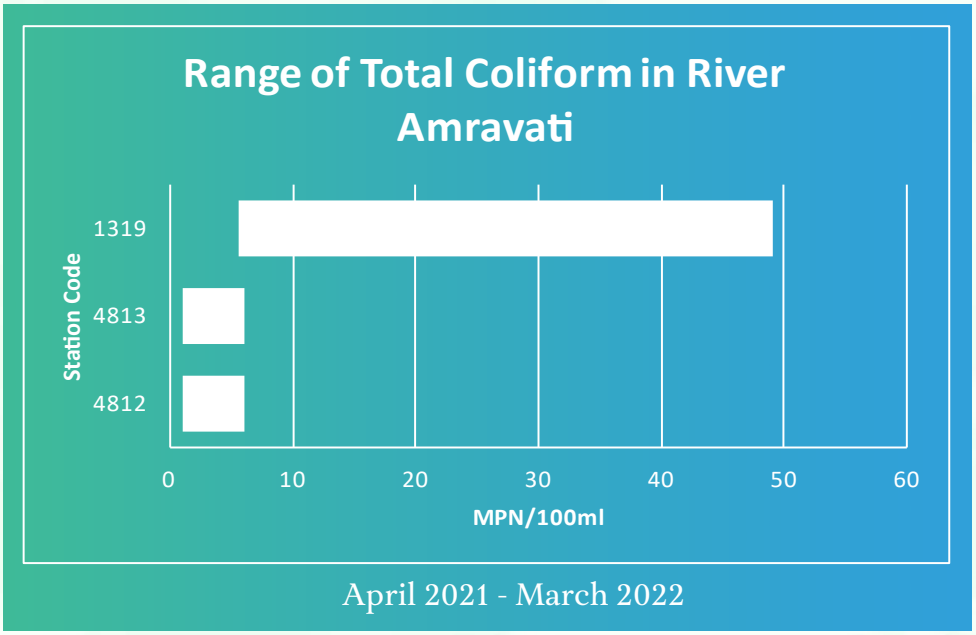
pH in most stations of river Amaravathi falls under the range of 6.5 – 8.5.

Dissolved Oxygen of most stations of river Amaravathi is above the minimum value of 6mg/L.





BOD values of all the 3 stations range between 0 - 2 mg/L and also exhibits the below detectable limit value of 1mg/L in some month.



Total Coliform of the river Amaravati is less than 50 MPN/100ml.

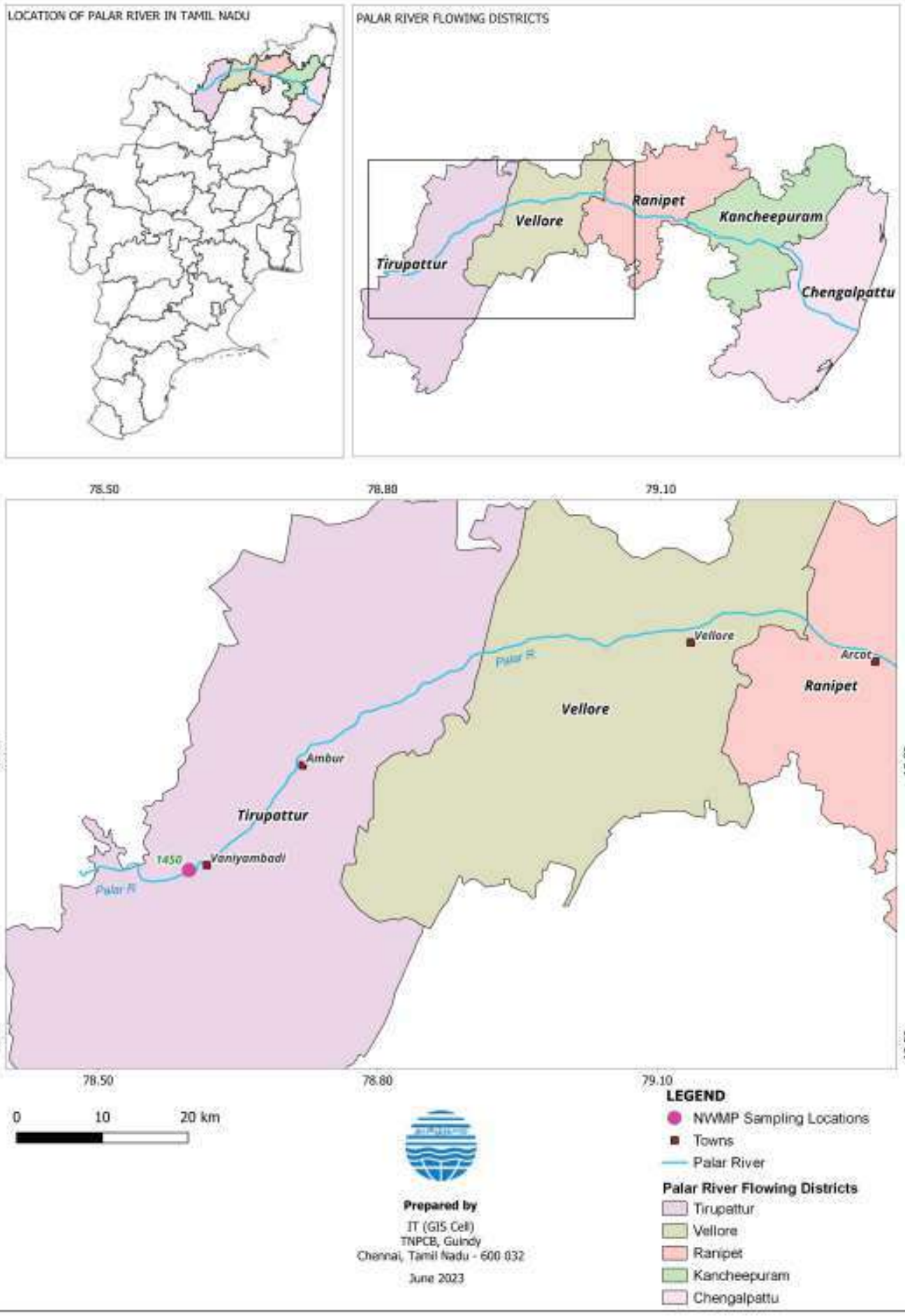
River Palar

Stretches for about 222 Km in Tamil Nadu

The Palar River originates in the Nandi Hills of the Chikkaballapur district in the neighboring state of Karnataka. It emerges from a spring near the village of Kudimallapalle and initially flows eastward through Karnataka before entering Tamil Nadu.

After entering Tamil Nadu, the Palar River flows through the districts of Vellore, Kanchipuram, and Chengalpattu before finally draining into the Bay of Bengal. The river runs for a total distance of approximately 348 kilometers (93 kilometres in Karnataka, 33 kilometres in Andhra Pradesh and 222 kilometres). Its flow is intermittent, meaning it does not have a consistent water supply throughout the year.

MAP SHOWING NATIONAL WATER QUALITY MONITORING PROGRAMME (NWMP) SAMPLING STATIONS ALONG PALAR RIVER, TAMIL NADU



Prepared by

IT (GIS Cell)
TNPCB, Guindy
Chennai, Tamil Nadu - 600 032

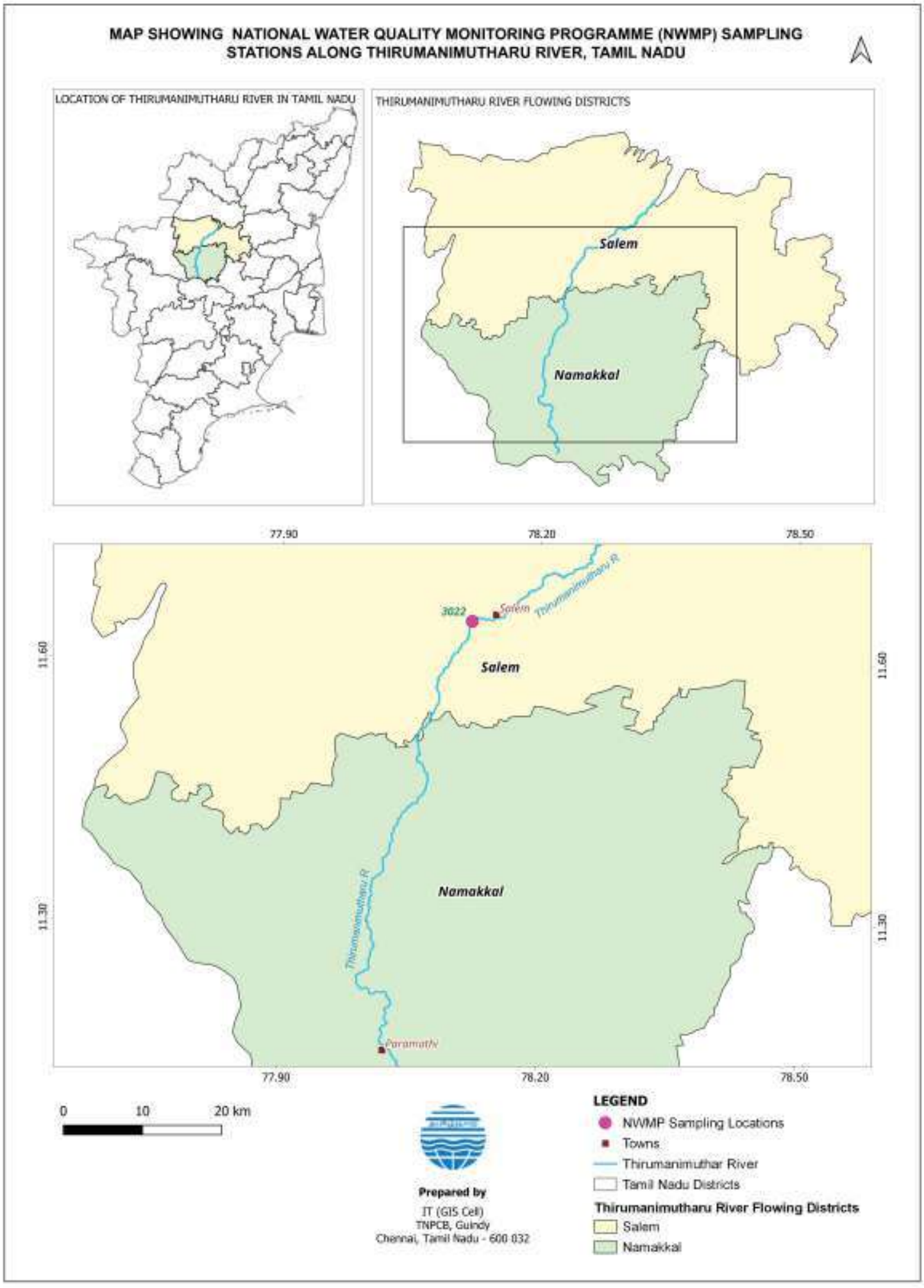
June 2023

The River Thirumanimutharu originates from Manjavadi in Shevaroy Mountain and flows through the Salem and Namakkal District. It arises in the Yercaud hills. River Thirumanimutharu joins the River Cauvery at Nanjai Edayar place in Namakkal District. In Salem District the River flows over a stretch of approximately 55 KM from Manjavadi in Shevaroy Mountain and flows upto Papparapatti. From Papparapatti it enters into the Namakkal District and confluences with River Cauvery at Nanjai Edayar.

River Thirumanimutharu

In Namakkal District the River Thirumanimutharu enters at Mamundi Village, Rasipuram taluk and ends at Kooduduraï village, Mohanur Taluk, The total length of River Thirumanimutharu is about 62 KM in Namakkal district. River Thirumanimutharu flows through Acchankuttapati, Kuppanur, Pallipatti, Vallaiyakaranur, Salem Town, Veerapandi, Attayampatti, Papparapatti and Namakkal district.

From Papparapatti it enters into Namakkal District and confluences with the River Cauvery at Nanjai Edayar.


MAP SHOWING NATIONAL WATER QUALITY MONITORING PROGRAMME (NWMP) SAMPLING STATIONS ALONG THIRUMANIMUTHARU RIVER, TAMIL NADU
LOCATION OF THIRUMANIMUTHARU RIVER IN TAMIL NADU
THIRUMANIMUTHARU RIVER FLOWING DISTRICTS
Salem
Namakkal
77.90
78.20
78.50
11.60
11.30
3022
Salem
Thirumanimuthar R
Salem
Namakkal
Thirumanimuthar R
Paramathi
0
10
20 km
LEGEND
NWMP Sampling Locations
Towns
Thirumanimuthar River
Tamil Nadu Districts
Thirumanimutharu River Flowing Districts
Salem
Namakkal
Prepared by
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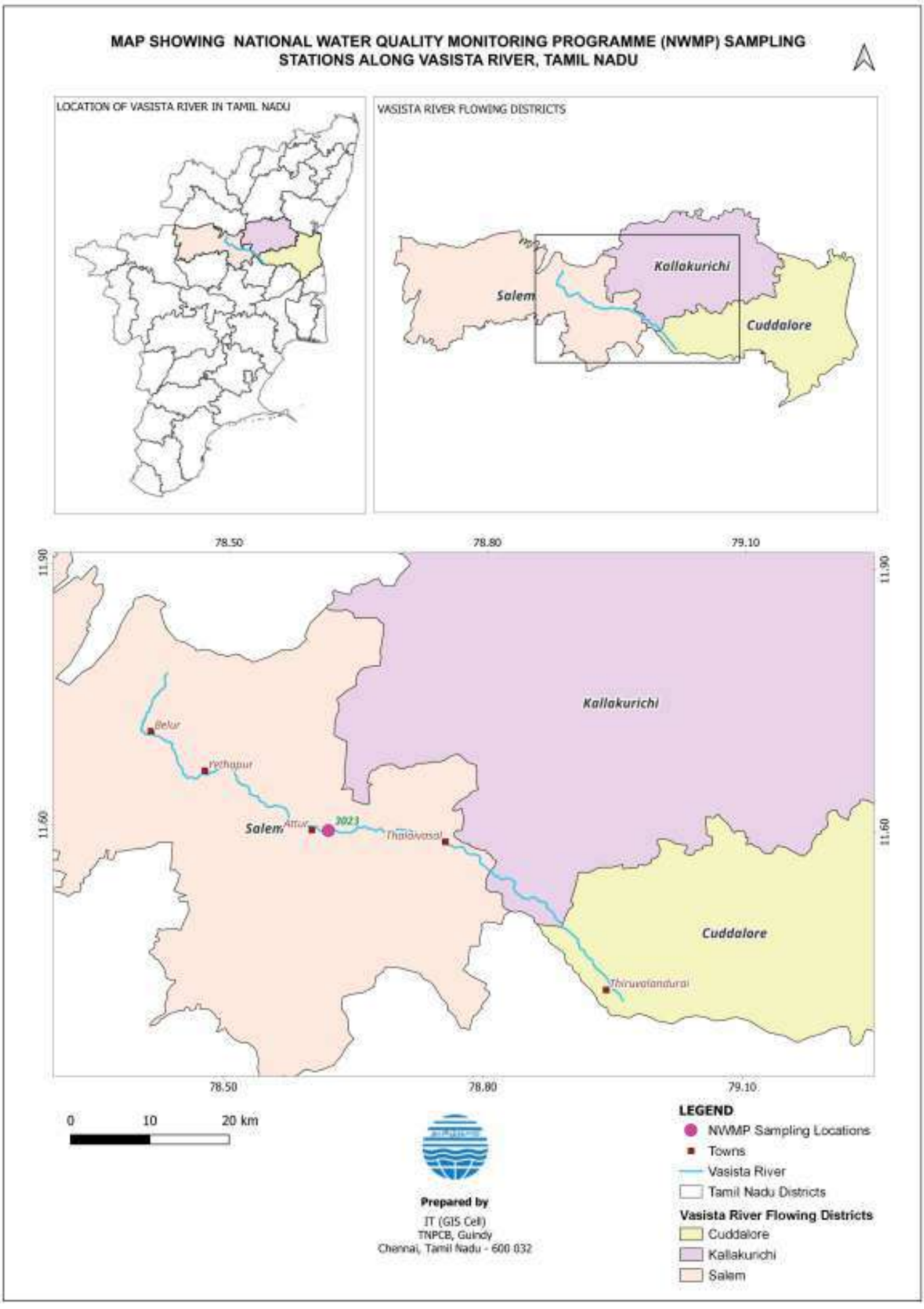
TNPCB, Guindy
Chennai, Tamil Nadu - 600 032

River Vasista

River Vasista Originates from Puzhuthikuttai dam and Pappanaickenpatti Dam flow through Pethanaikenpalayam, Attur, Deviyakurichi, Manivilundhan, Thalaivasal and Aragalur and enters into Villupuram District (map enclosed).

In Salem District the River flows over a stretch of approximately 74 KM from the Pappanaickenpatti Dam and approximately 13 KM from Puzhuthikuttai dam. River Vellaru which originates from Jarugumalai R.F confluence with the River Vasista at Kundu ManiyanKaradu. River Chitraru which originates from Pethanaickenpalayam lake confluence with the River Vasista at Narasingapuram.

River Vasista and River Swedha flowing together at Ayan Peraiyur Village and forms River Vellar which finally confluences in Bay of Bengal at Parangipettai. The Vellar system consists of the Vasista and Sweata Nadi, which drain two parallel valleys running east and west in Attur taluk, former carrying off the drainage of Kalrayan Hills and the latter carrying the drainage of Kolli Hills and Pachamalais.


MAP SHOWING NATIONAL WATER QUALITY MONITORING PROGRAMME (NWMP) SAMPLING STATIONS ALONG VASISTA RIVER, TAMIL NADU
LOCATION OF VASISTA RIVER IN TAMIL NADU
VASISTA RIVER FLOWING DISTRICTS
Salem
Kallakurichi
Cuddalore
78.50
78.80
79.10
11.90
11.60
Belur
Yercaud
Salem
Attur
3023
Thalaivasal
Kallakurichi
Cuddalore
Thiruvalandurai
0
10
20 km
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LEGEND
NWMP Sampling Locations
Towns
Vasista River
Tamil Nadu Districts
Vasista River Flowing Districts
Cuddalore
Kallakurichi
Salem

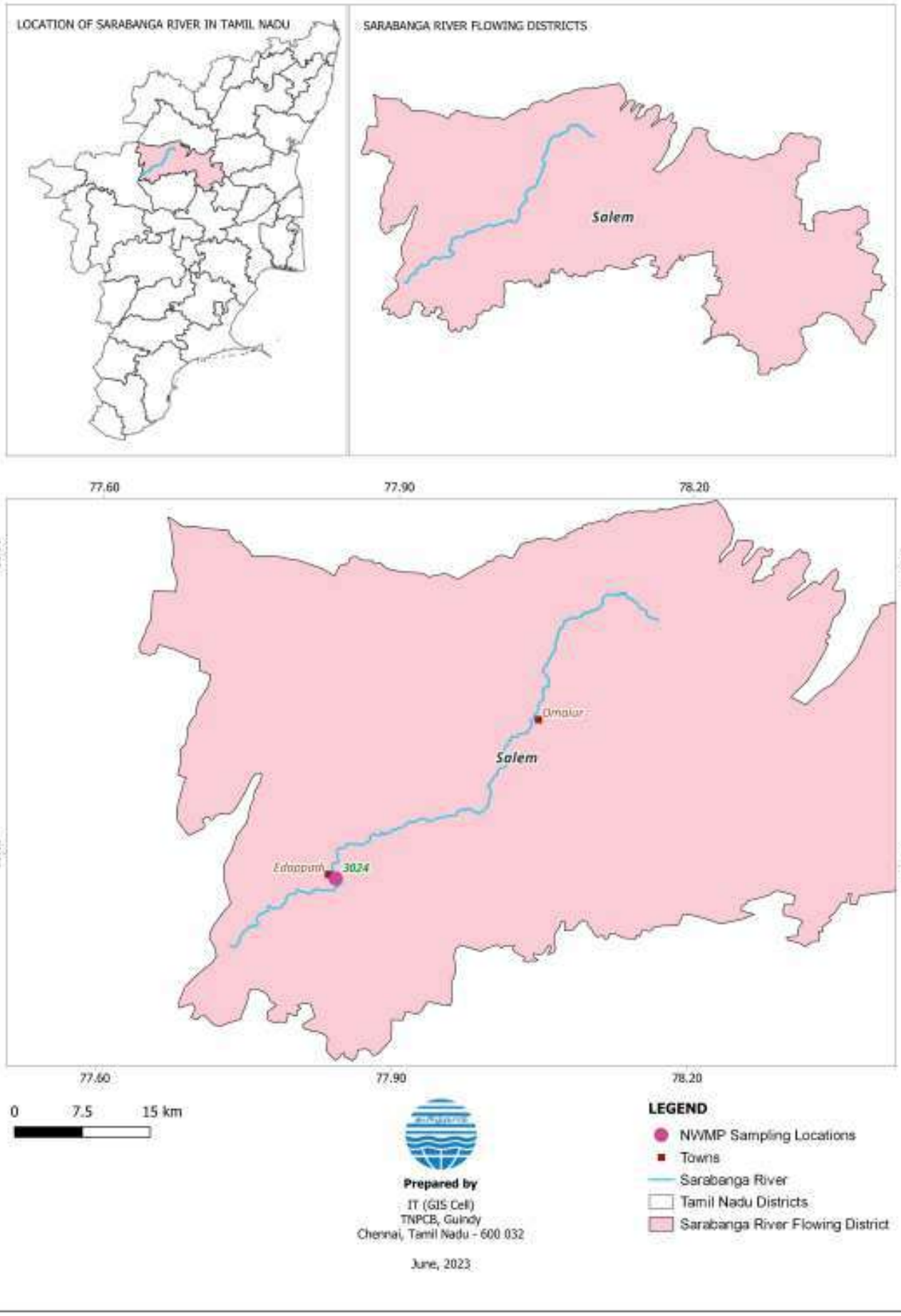
River Sarabanga

River Sarabanga is located in the state of Tamil Nadu in Salem & Namakkal District. It originates from Shevaroy Hills (Yercaud foot hills) in Salem district. The River Sarabanga flows through Danishpettai, Poosaripet, Omalur, Thoppur, Tharamangalam, T.Konagapadi, Pappampadi, Vellalapuram,Idappadi, Chettipatti, Peramachipalayam, Thevur and joins in the River Cauvery near Annamar Kovil before flowing into the Bay of Bengal. The Total length of the main stream is nearly 70 km from Omalur to Idappadi.

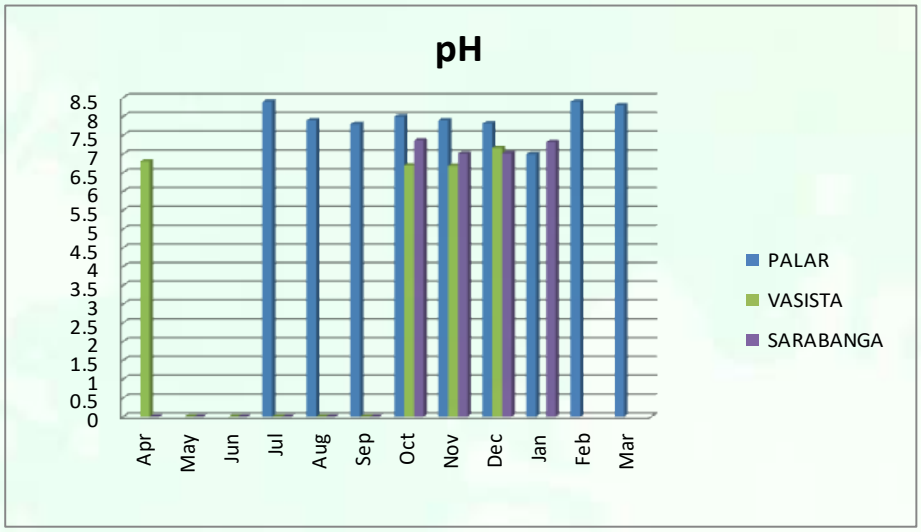
In Salem District the River West Sarabanga originates from Danishpet in Shevaroy Mountain and River East Sarabanga originates from foot hills of Yercaud at Vattakadu and confluences with West Sarabanga at V.O.C Nagar near Omalur. Both combines to form River Sarabanga and flows through the Salem and Namakkal District. In Salem District the river flows over a stretch of approximately 48 km from Danishpet at the foot hills of Shevaroy Mountain and enters into Idappadi Taluk at Pappampadi.

The River East Sarabanga flows over a stretch of approximately 12.5km from Vattakadu and confluences with the West Sarabanga at V.O.C Nagar. From Pappampadi it enters into Edappadi Taluk and confluences with River Cauvery at Annamar Kovil in Namakkal District. In this stretch, river always dry in nature and there is no water flow in the river, except seasonal rain.

MAP SHOWING NATIONAL WATER QUALITY MONITORING PROGRAMME (NWMP) SAMPLING STATIONS ALONG SARABANGA RIVER, TAMIL NADU

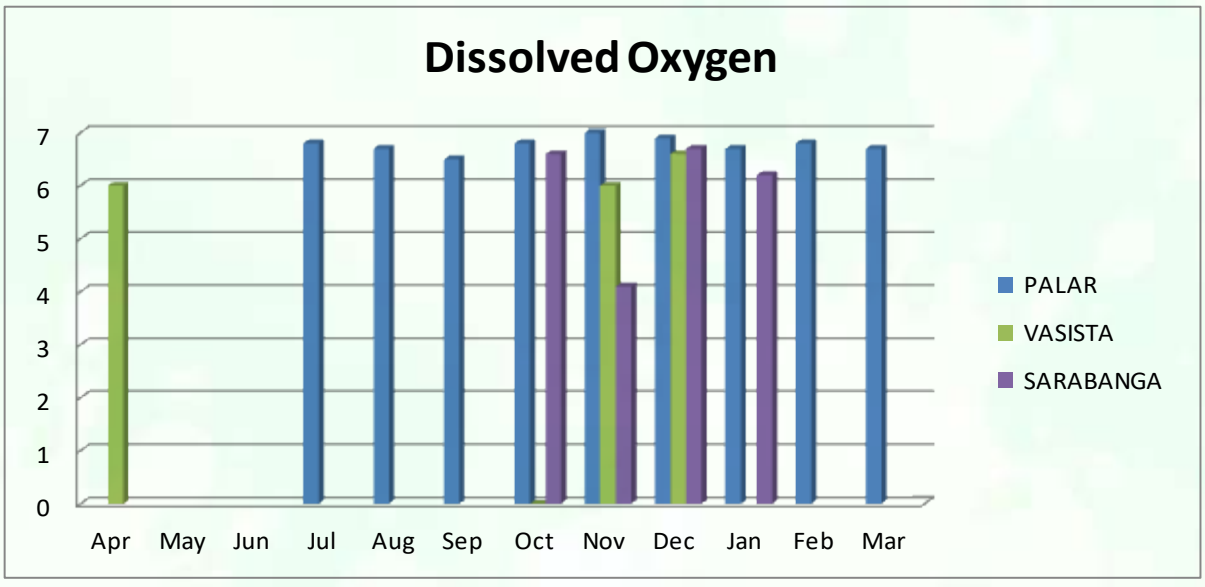


Station Code	Location
1450	River Palar at Vaniyambadi water supply head work, Tamilnadu
3022	River Sarabanga at Edapadi at Salem, d/s of textile dyeing industries effluent, Tamilnadu
3023	River Thirumanimuthar at Salem, d/s of Sago & textile dying industries, Tamilnadu
3024	River Vasista at Thulukannur at Salem, d/s of Sago indusries effluent, Tamilnadu



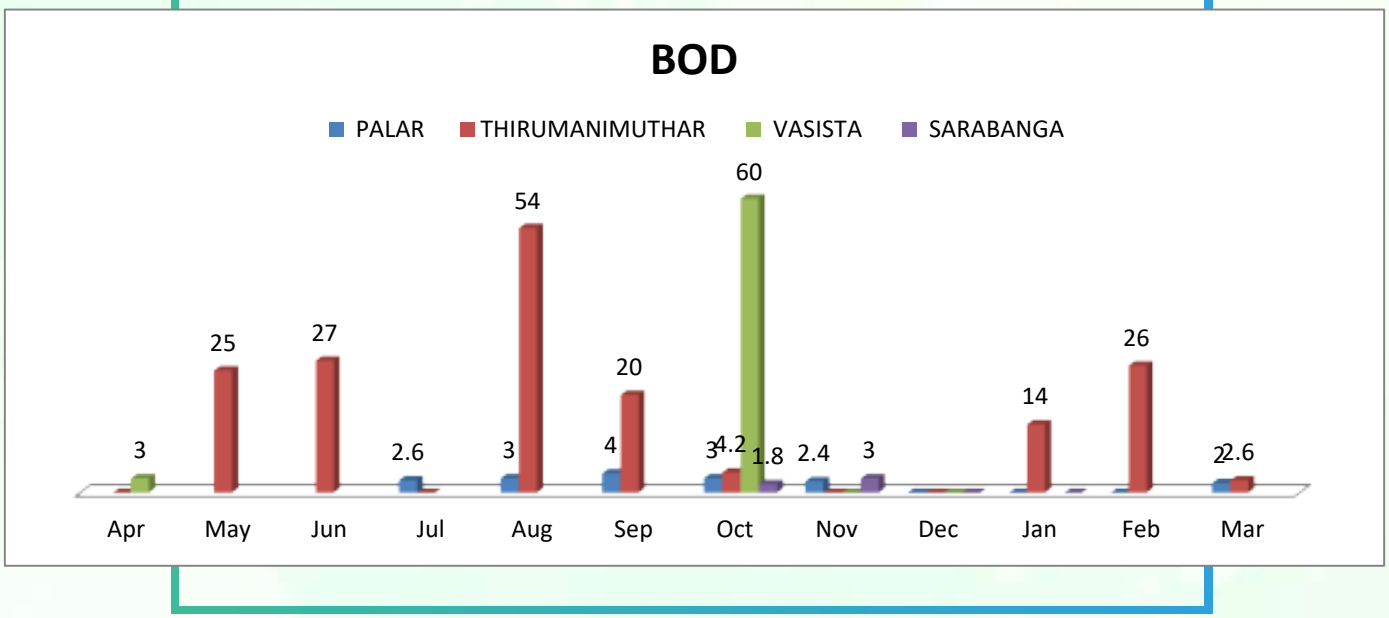
April 2021 - March 2022

All 4 rivers being non-perenial rivers, no flow has been observed in certain months of the year.



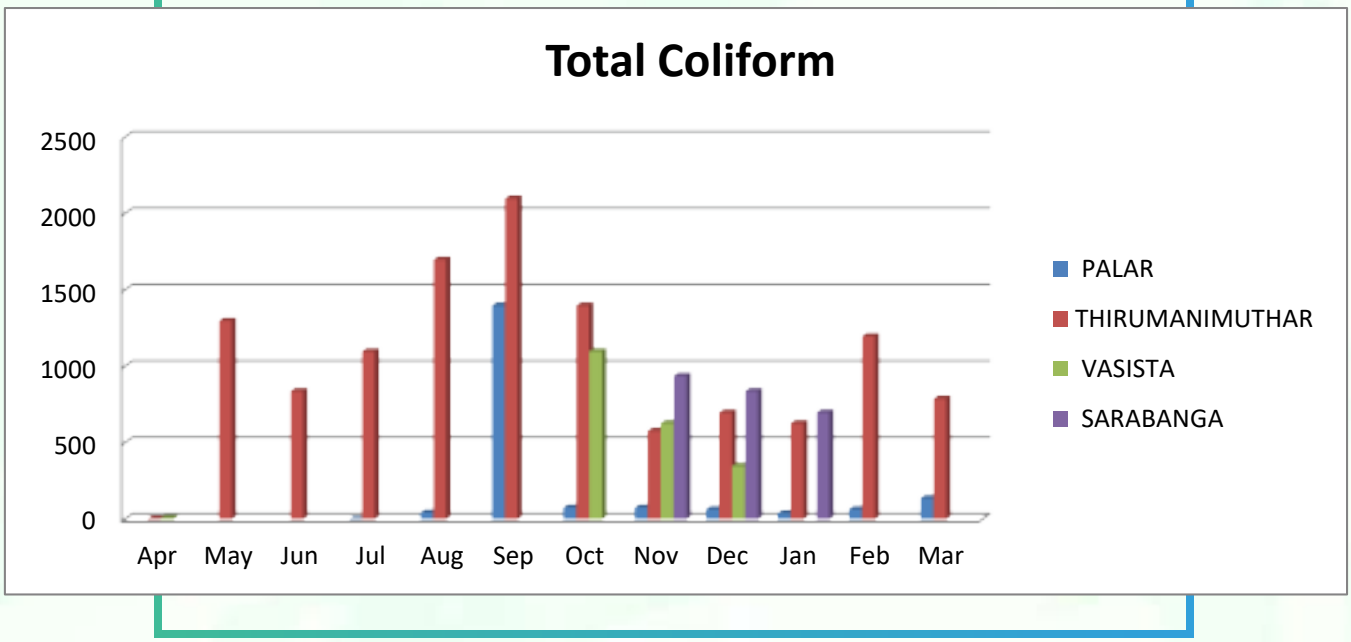
April 2021 - March 2022

All 4 rivers being non-perenial rivers, no flow has been observed in certain months of the year.



April 2021 - March 2022

All 4 rivers being non-perenial rivers, no flow has been observed in certain months of the year.



April 2021 - March 2022

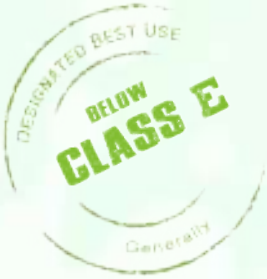
All 4 rivers being non-perenial rivers, no flow has been observed in certain months of the year.

Result

• River Palar

The flow of the river is only during Jul 2021 - Mar 2022. The pH of the river falls between 6.5- 8.5, DO between 6 - 8.5 mg/L, Total Coliform less than 500 MPN/100ml in most stations and Biological Oxygen demand ranging between 1- 4 mg/L

• River Thirumanimuthar



The Total Coliform is between 500 - 2500 MPN/100ml in most stations and Biological Oxygen demand is ranging between 14 - 54 mg/L

• River Vasista

The flow of the river was only during Oct 2021 - Dec 2021. The pH of the river falls between 6.5- 8.5, DO between 5-8.5 mg/L, Total Coliform is above 500 MPN/100ml in most stations and Biological Oxygen demand ranging between 1- 4 mg/L

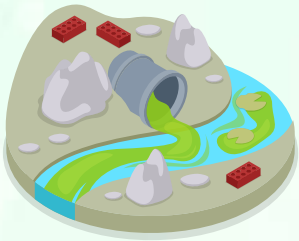
• River Sarabanga

The flow of the river was only during Nov 2021 - Dec 2021. The pH of the river falls between 6.5- 8.5, DO between 5-8.5 mg/L, Total Coliform less than 1000 MPN/100ml in most stations and Biological Oxygen demand ranging between 1- 4 mg/L

How to keep our Rivers healthy

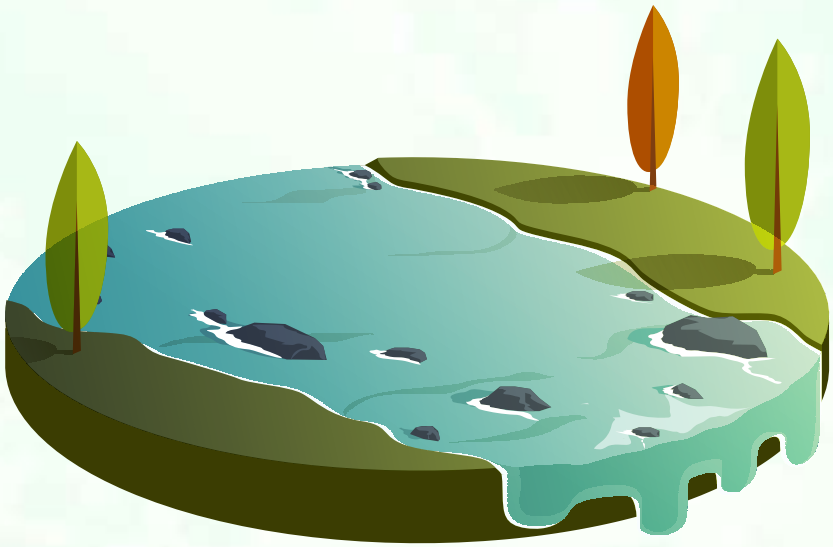
Avoid using chemical soaps and use Organic Soap & detergents instead

Avoid bathing, Washing Cloths & cleaning cattles in the river



Avoid throwing Plastic, Solid & Liquid Waste into the river water.

Use clay idols for Vinayagar Chathurthi and other fesivals



OUR TEAM

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Member Secretary

Dr. S. Selvan, M.E, M.B.A, Ph.D,
Chief Environmental Engineer

Thiru.Shankara Subramanian M.Sc.,
Deputy Director (Air)

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Assistant Director (W&A) Retd.

Dr.Helen Mary M.Sc, Ph.D
Deputy Chief Scientific Officer

Priyanka.K. B.Tech (E&I), M.Sc
Environmental Scientist

Senthil.D. M.Sc
Environmental Scientist

Special Thanks to

O/o District Environmental Engineers,
Advanced Environmental Laboratories (AELs) &
District Environmental Laboratories (DELs),
Tamil Nadu Pollution Control Board

Tamil Nadu Pollution Control Board

76, Mount Salai, Guindy, Chennai - 600 032

044 - 22353134-139 Fax: 044-223533068 tnpcb-chn@gov.in www.tnpcb.gov.in

Designated Best Use Water Quality Criteria - CPCB

Drinking water source without conventional treatment but after disinfection			
Class A			
pH	DO	BOD 5 days 20ºC	TC
6.5 - 8.5	6 or more	2 or less	50 or less
	mg/L	mg/L	MPN/100ml

Outdoor Bathing (Organised)			
Class B			
pH	DO	BOD 5 days 20ºC	TC
6.5 - 8.5	5 or more	3 or less	500 or less
	mg/L	mg/L	MPN/100ml

Drinking water source after conventional treatment and disinfection			
Class C			
pH	DO	BOD 5 days 20ºC	TC
6 - 9	4 or more	3 or less	5000 or less
	mg/L	mg/L	MPN/100ml

Propogation of wild life and fisheries		
Class D		
pH	DO	Free Ammonia
6.5 – 8.5	4 or more	1.2 or less
	mg/L	mg/L

Irrigation, Industrial Cooling, Controlled Waste disposal			
Class E			
pH	Electrical Conductivity	Sodium Absorption Ratio	Boron
6.0 - 8.5	Max 2250 @ 25º C	Max 26	2
	micro mhos/cm	-	mg/L

Source : https://cpcb.nic.in/wqstandards/